The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOLUME L. CHICAGO, ILLINOIS, JUNE 13, 1908. NUMBER 24.

Addresses

STATES' RIGHTS AND THE NATIONAL HEALTH.

ORATION ON STATE MEDICINE AT THE FIFTY-NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION AT CHICAGO, JUNE 2-5, 1908.

CHARLES HARRINGTON, M.D.

BOSTON.

The movement now in progress for the establishment of national control of the public health is no new thing: it may properly be designated as an acute manifestation of a disturbance of long standing, the prognosis of which, while doubtful at times, has some few hopeful signs. It began so long ago as 1871, when, at the annual session of this Association, resolutions were presented to the effect that, on the establishment of state boards of health by at least six states, steps should be taken to form a national health council, auxiliary to the Association as a section on hygiene. At the next meeting, suggestion of an appeal to the government to establish a national department of health to be supervised by the Association met with objection, but the committee to which the resolutions presented at the previous meeting had been referred was continued as the Section on State Medicine and Public Hygiene.

A year later the establishment of a National Sanitary Bureau was again urged, and the motion was referred to a committee; and there the matter rested for another year (1874), when a resolution was passed in the Section on State Medicine, providing for an appeal to Congress, and a committee was appointed to report the next year a draft of a bill to establish a National Department of Health. When this draft was due, interest in the centralization of public health supervision by state authorities was so little developed that but seven states had followed the example, set by Massachusetts, in 1869, of establishing a State Board of Health. These were California, Georgia, Louisiana, Maryland, Michigan, Minnesota and Virginia. Since that time, every state in the Union has established either a board or a commissionership, the latest to do so being Idaho, in 1907, and the newly-admitted Oklahoma, early in the present year. At intervals, during all the years that have elapsed since the desirability of a central control of public health was first broached, bills have been offered in Congress to the attainment of that end and have been duly pigeon-holed.

The nearest approximation to a successful outcome of the agitation was reached in 1879, when, after the country had been aroused by the extensive epidemic of yellow fever which occurred in 1878, a National Board of Health was established, authorized to investigate all questions concerning the public health, to give especial attention to the subject of quarantine, and to concern itself with the project of establishing a permanent national health organization. During the years of its official life, this body, which consisted of seven members appointed by the president and four representing respectively the Department of Justice, the Army, the Navy and the Marine-Hospital Service, made a number of important researches and inquiries, but in 1882 its duties were restricted to the investigation of cholera, smallpox and yellow fever, and then the appropriations for its necessary expenses began to be withheld; and eventually, in 1893, its official existence was terminated. Although in legal existence fourteen years, the period of its real activity was, through lack of funds, but four. Since 1893, the nearest approach to a national health authority has been the Marine-Hospital Service, which in 1902 was by act of Congress changed in name to the United States Public Health and Marine-Hospital Service. This organization had its original inception in 1798, when 20 cents per month was deducted by law from the pay of all seamen on American vessels entering from foreign ports, to be collected by the customs authorities and expended in the districts where collected, for the relief of invalid seamen in hospitals or elsewhere. Hospitals were established, beginning in 1800, at Norfolk, Boston, Newport and Charleston, then in New Orleans, up the Mississippi at various points, Cleveland, San Francisco, Detroit and elsewhere. In 1870, the position of supervising surgeon was created; later, this title was changed to supervising surgeon general and still later to surgeon general. In 1884, the tax, which had been doubled in 1870, was abolished, and the expense of maintenance was taken from the tonnage tax. The Act of 1902, creating the Bureau of Public Health and Marine-Hospital Service, was preceded by one which provided for the establishment of the Hygienic Laboratory, for the investigation of contagious diseases and matters pertaining to the public health.

The duties and activities of the Bureau of Public Health are many and varied. In addition to the work for the performance of which it originally was established, it has general supervision of marine and interstate quarantine, it inspects vessels and immigrants, conducts physical examinations for a number of branches of the government, collects data concerning the incidence of the various diseases dangerous to the public health in all parts of the world and publishes reports thereon, assists the states in controlling, suppressing and preventing epidemics, examines all establishments engaged in interstate commerce in vaccines, serums and antitoxins, conducts researches in medical zoology, biologic chemistry, pharmacology, bacteriology and other fields of sanitary science, and engages in other miscellaneous investigations.

Once each year, and oftener if requested by not less than five state health authorities, the surgeon general

is required by law to call the Conference of State and Territorial Boards of Health for the consideration of matters pertaining to the public health, but the government assumes none of the expenses of these annual conferences, either for travel or for subsistence.

Every attempt thus far made to confer on the national government any real power to supervise the national public health has found the Constitution in the way; for when that instrument was perfected at the first session of the first Congress and our wise forefathers decided that all powers not delegated to the United States nor prohibited by the Constitution to the states should be reserved to the states; in an age which knew not steam and electric power and rapid transportation, which knew nothing of the causes of disease and the methods of their spread, which could not foresee the boundless possibilities of the growth and development of the medical sciences, and which could have no conception of the relation of public health to national prosperity, there was not a phrase of any sort contained therein which by any ingenuity of man can be construed as delegating to the nation any public health authority whatsoever.

The very first attempt made by the United States to enact a quarantine law met with opposition, and a section to empower the president to enforce quarantine was rejected by a two-thirds vote, as an interference with the states' police powers; but the provision to authorize the government to assist the states in excluding yellow fever —for it was in consequence of an outbreak of that disease that the bill was introduced—was accepted. From 1700, when Pennsylvania adopted "An act to prevent sick vessels coming into this government," the several colonies had at various intervals adopted their own laws relative to quarantine, and were not in 1796, nor later, willing to allow interference with their foreign commerce; for in addition to their jealous regard for states' rights, there existed then that same spirit of commercialism which seems to outweigh all consideration of individual and collective health. By lax enforcement of quarantine restrictions, a port could attract trade that otherwise would have gone to another, where the laws were enforced with strictness, just as within very recent times we have seen local authorities so mindful of the destructive influence of quarantine on trade that the existence of pestilential diseases has been denied, in the hope that the outbreak would die out before attracting outside attention.

The law of 1796 was repealed in three years in favor of another, which, while providing for assisting the states in enforcing their own laws, empowered the Treasury Department to make rules and regulations concerning the unloading of cargoes of infected vessels at places other than ports of entry, and provided for the storage of cargoes in government storehouses, in accordance with the health laws of any state. This law, it will be noted, related to commerce rather than to public health. From time to time, outbreaks or threatened outbreaks of exotic diseases caused Congress to enact laws conferring on the Treasury Department the right to assist state and city authorities in preventing the introduction of infections, but always with the proviso that the local regulations should not be modified or superseded. Repeated outbreaks of yellow fever led to repeated demands for a national quarantine, but they were always foredoomed to failure, on account of the jealous regard for states' rights; and even after the widespread, disastrous and enormously costly epidemic of yellow fever, of 1878, a most reasonable bill to empower the government to act in emergencies beyond the ability of the states to control failed of passage. It was then that the National Board of Health, so shortly to be starved out of existence, was established. Later in the same year (1879) a quarantine law was passed, which read very well until the usual proviso appeared, concerning the impairment or supersession of state quarantine laws and regulations.

The law of 1879 was superseded by the Act of Feb. 15, 1893, entitled "An act granting additional quarantine powers and imposing additional duties on the Marine-Hospital Service," which, while establishing a national system of quarantine, interferes in no way with the right of state and municipal authorities to prescribe and enforce measures additional to the minimum requirements of the national law. At last a way was discovered to control the entrance into United States ports of vessels from foreign ports, without infringing local rights. It provided for the uniform operation of all rules and regulations made by national authority; and only in the event of failure on the part of local authorities to enforce them adequately, is the government empowered to act in their stead. It is an interesting commentary that whereas, until 1893, no adequate national quarantine regulations were possible on account of the right of the states to impair their own health if they chose so to do by admitting exotic diseases, the delegated authority to regulate interstate commerce enabled the national government lawfully to encroach on this same prerogative by establishing three years earlier (1890) an interstate quarantine law without regard to local laws, but without in any way impairing the right of states and municipalities to deal with infected persons and things in their own way so soon as these are within their respective jurisdictions.

In view of the difficulties which for a century were in the path of a reasonable and necessary safeguarding of the public health by national quarantine, it is small wonder that the movement for a central health authority has made so little real progress, in spite of the fact that, except in certain matters which clearly cannot be taken over by the national government without constitutional amendment, it has never been proposed that the nation should meddle in affairs which affect only the states or that it should undertake to assume in any state any function concerning health matters that the state is willing and able to carry out itself.

The doctrine of states' rights is an outgrowth of the ancient principle that an Englishman's house is his castle. The individual has rights that can not be infringed by his neighbors, just as he has obligations for their good; the municipality of which he is a member has rights which can not be abridged by the aggregation of communities which make a state; in its turn, the state has its rights as against the nation, and finally the nation has its rights and its obligations in respect to other nations. The individual has no right so to conduct himself and his house as to be a nuisance to his neighbors, and in no way can he become a greater nuisance to them than by imperilling their health; hence when he or his household becomes a menace to the health of his fellows, the community steps in and restrains him in various ways. If he or a member of his household has smallpox or other communicable disease or has been exposed to contagion, the house is placed in quarantine or the victim is removed, forcibly if necessary, to

a place of detention and treatment, for both his own good and the public welfare. By becoming a menace to the public health he loses certain individual rights, just as by becoming a menace to public morals he may, by due process of law, be restrained of his liberty. Again, while it is the right of the individual to marry and reproduce his kind, he may not deny his family the necessaries of life or keep his children from school, for if he attempts so to do the community interposes and restrains him.

Similarly, a municipality which by neglect of sanitary observance becomes a menace to the health of its neighbors is taken in hand by the authorities of the state and compelled to pay due regard to the rights of its citizens as a whole. Why should the parallel end here, as it does? Should a state neglect the health interests of its citizens and permit epidemic disease to rage without restriction, to the peril of the health of its neighbors, should not the community of states have the right to interpose and say: "If you can't or won't exercise your police rights so as to protect your own citizens, we will at least prevent you from becoming a menace to the national health"? No; the regulation of the national public health was not delegated to Congress, and hence the right to be a national nuisance was reserved to the states.

The individual must give up many rights to insure communal happiness and prosperity and an advanced civilization, for submission to the claims of the majority rights is a fundamental principle of civil government; and just as individuals and municipalities must be subordinate to the general welfare of municipalities and states, so should states' rights as to matters of national public health be subordinate to the rights of the nation. The health interests of the individual and the municipality are mutual, and so are those of the municipality and state, and of state and nation; and just as the alleged rights of the individual may constitute a menace to the municipality, so may those of a state become a national evil. If a parent's authority over his children may be interfered with by the state for the common good, why should not the right extend to the nation, of which he is equally a citizen and subject? In case of pandemic disease, should not the nation have the same right as a state in case of epidemic outbreaks within its borders? If United States troops can be called on to suppress riots and violence in mining camps, as lately has been done in one of the far western states, should not national sanitary police be called on to suppress the rioting of epidemics and pandemics when a state is powerless or neglectful to act? The power to wage war to protect the country from hostile invasion rests with the Congress, but the right to wage war against the invasion of the country by pandemic disease is vested in the state and can not be abridged except by constitutional amendment. It is true that there appears to be no present danger, but there exists always the possibility that bubonic plague, for example, may gain a foothold in some of our ports and get beyond the control of local authorities, especially if initial cases are concealed through commercial considerations. In such an event, should a state neglect or be powerless to cope with the situation, the nation ought to have the right to take it in charge without waiting for a formal invitation. If war is hell, what is a pestilence such as has raged for years in India? If the nation can wage war to defend the national honor, if our humanitarian instincts can lead us to sacrifice thousands of valuable lives in battle and in typhoid-infected camps and millions of treasure to give freedom to the colony of another nation, ought not the union of states to have the right to defend the national health, if through the neglect of one or more of them the country at large should be threatened with pestilence? Far be it from me to advocate national meddling with the internal health affairs of a state that is willing and able to assume its own burdens, but it seems not unreasonable to suggest that the right of a state to be a national health nuisance might properly be abridged by a constitutional amendment giving the central government authority to act for the common good when local neglect or inability make it imperatively necessary, but only then.

In respect of states' rights it is remarkable what a difference may exist under conditions which fundamentally are alike. States' rights prevented national quarantine for about a century, for it was the right of a state to say whether it would import infection from abroad to be spread among its people; but if the act of Aug. 30, 1890, prohibiting the importation of adulterated foods and beverages, the act of March 3, 1903, authorizing the Treasury Department to deliver to the Department of Agriculture samples of consignments of foods for the purpose of analysis, or the act of March 2, 1897, relative to tea were objected to as encroachments on the police powers of a state to protect the health of its people, the objections were not very loudly expressed. The Food and Drugs Act of June 30, 1906, often called the national pure food law, is not a health law, but a regulation of interstate commerce, for in the sacred name of commerce we can enact laws called for by the public as a means of protection of the public health. For years the country suffered from areal fermentations set up by the public apprehension that it was slowly being put to death by a dangerously adulterated food supply, and the excitement finally spread to such an extent that Congress had to listen respectfully to the demand that the great public be protected from this living death. Having, however, no authority to encroach on the states' police powers, it could not enact health laws, but under its delegated right to legislate concerning commerce, the desired law was passed as one relating to interstate commerce, and the troubled minds were calmed. The pure food law was and is essentially a law against commercial fraud and only incidentally and to an insignificant extent is it a health law. In so far as it is a health law, it is, according to the old contentions concerning quarantine, an encroachment on states' rights. Under the benevolent plea that certain preservative substances are dangerous to health, states which do not so believe can be protected by the national authorities from their own folly so far as that folly can be counteracted by interstate commerce laws, but not when the means of catering to this folly can be applied within the states' boundaries. Thus, a manufacturer of jams and preserves, through a shortage of small fruits is forced to draw on Canada for a supply to fill domestic orders, and in order to insure good condition on arrival directs that a certain small amount of a preservative substance, the use of which is expressly permitted by the laws of his state, shall be applied before shipment. On arrival at the custom house, the goods are denied entrance, because of the presence of the preservative, and neither the offer to file a bond that the manufactured article would not be shipped out of the state, nor a statement from the one charged with the enforcement of the state food laws that the use of the

preservative is recognized as legitimate by the state law on the subject, can cause a reversal of the ruling. Such was the experience of a Massachusetts house in good business standing. The fruits could have been admitted without the preservative and the latter could have been applied immediately after their removal without transgressing any state law; and so far as the Massachusetts consumer was concerned the result would have been the same whether the application occurred in Canada or in Boston. Is not such a governmental interference an encroachment on states' rights?

The national Food and Drugs Act, I repeat, is not primarily a health law and from the standpoint of health it was not needed. It is rather a law against misbranding and fraud, but those who clamored for it thought they were saving their lives when they succeeded in forcing its passage. I repeat that from the standpoint of health it was not needed, and I will go farther and assert that from the standpoint of commerce it could have been dispensed with, if all the states had done their duty to themselves. As a fact, the national government was begged and besought and urged and driven and compelled to do for the states what it was the duty of each to do for itself. The movement in its favor was strongest in those states which had either no general food laws or inadequate ones, and which spent not a dollar annually on the purity of their food supply. The movement was a successful one to load on the national government work which should have been done at home. Massachusetts had been enforcing its general food law for nearly 25 years when the national law went into effect, and not yet has it appeared that the latter has had any appreciable influence on what was already a healthy condition of affairs. Had every state done its full duty to its citizens, there would have been no necessity for national legislation, no need of large annual appropriations for laboratories, chemists and inspectors. In only one particular has Massachusetts needed any assistance from outside, and then to control a matter which the states expressly delegated to the Congress, namely the exclusion from interstate trade of practically the only food that can be unwholesome on a large scale. I refer to that food which may be pure and clean to the eye and palate and so far as chemical analysis can determine, and yet be dangerous, and which is of so perishable a nature that it can not be held up in quarantine until proved to be pure and wholesome and then released into the market. Of course, I refer to stale, dirty and infected milk. A state can exclude any merchandise that is designed to corrupt the morals, and it can, as decided by the United States Supreme Court, exclude infected material and diseased animals and anything calculated to endanger morals, health or life. But how can one tell whether or not a given package of milk is infected unless something is known of the circumstances of its production? The health authorities of Massachusetts investigated the condition of the extra-state dairies from which milk was being shipped, and it appeared that under the established national standard a large proportion of the milk was adulterated in that it was stale and dirty, instead of fresh and clean, and from diseased rather than healthy cows. No state can forbid the citizens of another state doing that which is lawful within its own borders, but the national authorities can exclude from interstate commerce any adulterated article, and therefore they were requested to exclude the product of certain farms where the cows were diseased and the methods of handling were dirty, and where the milk was in part forty-eight hours old when shipped. I will not dwell on the details of a somewhat prolonged correspondence, which was barren of results, or attempt to give the reasons why interstate commerce in the causes of preventable waste of human infant life can not be restricted, but it appears that there is no provision for a large force to look after public milk supplies, although we can spend millions annually in the federal inspection of meats. But it must be remembered that we are a commercial nation, and that while meat is an important item in our export trade, milk is consumed at home and not exported. It is true that animals intended for slaughter and the resultant meats intended for interstate commerce are examined, though not with that thoroughness that characterizes the inspection of meats for export, and that all animals with any of eighteen or more specified diseases are condemned so far as interstate commerce is concerned: but not so with the milk supply, although it is of so vastly greater sanitary importance.

For a nation that is pre-eminently commercial, this country is singularly blind to the necessity of conserving that which has well been defined as our greatest national asset, namely the national health. It is useless to attempt to determine the pecuniary loss which the nation suffers annually through sickness and death from preventable diseases, for apart from the mathematical difficulties in the determination of the money value of human life—for human beings are cast in many moulds and from different materials, some being parasitic and of a negative economic importance, others of enormous value, and each according to his present and prospective capacities for usefulness—we have but a small proportion of the items necessary for our calculations, which even a moderately good system of sanitary bookkeeping could place at our disposal. The statutory value of five thousand dollars set on a single human life is no more than a guess, and even though it should be determined to be a fairly accurate one, based on the average of a large number of investigated individual cases, the lack of adequate mortality statistics in a large number of our states would render futile any attempt to express the nation's pecuniary loss during any given period from deaths alone. Equally futile, with absolutely nothing more in the line of morbidity statistics than the mere compilation in a minority of the states of the number of persons stricken with certain of the transmissible diseases, and even then with no data as to the number of days lost, would be any calculation of the national sickness account. We can say only that with our great and growing population the annual waste from avoidable diseases must be prodigious. It is true that, in a number of our states, the state and municipal authorities, fully alive to the importance of protecting the public health, spare no efforts to restrict this loss within their respective jurisdictions, though in many but little is attempted, and the nation as a central authority does practically nothing, states' rights or no states' rights, except in so far as it maintains quarantine and the service for saving lives from the perils of shipwreck. It spends not a dollar to check the ravages of the leading causes of death, excepting the amount used in salaries and running expenses of the Bureau of Public Health and the Hygienic Laboratory, which, in comparison with the older laboratories of some of the European governments is not yet of great importance, though growing. Nothing is spent, beyond the usual and necessary salaries and expenses of the officers of the Public

Health and Marine-Hospital Service when these are called on to aid in controlling an outbreak of yellow fever or of plague by any of the states. In 1905, for example, the nation contributed officers' services, but not one cent of the quarter million dollars spent by New Orleans and not one cent of the expenses incurred by Louisiana, Mississippi and Florida to wipe out yellow fever and prevent its spread to other infectible areas, although the insect that carries the infection disregards states' rights, state lines and interstate quarantine. Ought the Gulf states to bear the entire expense of protecting their northern neighbors from invasion by yellow fever, and ought Maine and the other states along the Canadian border to perform the same service with regard to smallpox, merely because they are frontier states? If cholera should become imported into New Jersey or New York through any possible breakdown of quarantine, should those states be put to the entire expense of protecting their neighbors and the country at large? Washington answers these questions affirmatively.

We are a commercial nation, and human life and freedom from the preventable diseases of mankind are no part of foreign or domestic trade. It is otherwise with the diseases of plants and of the lower animals, for the products of the fields and farms and cattle ranges bring us great wealth. Hence Washington spends millions annually on plant and animal physiology and pathology. It is good business to expend thousands and tens of thousands against sheep scab and swine cholera, but the eradication ot human tuberculosis appears to be unworthy of national effort, if it entails national expenditure. The Department of Agriculture expends millions and millions annually to promote great crops and to aid the slaughtering industry; it experiments at great cost to devise means of gathering grapes of thorns and figs of thistles; but the government appropriates nothing to conserve the health of man. We are a commercial nation. Human health and human diseases are of minor commercial importance: swine erysipelas and chicken cholera are important, for they mean loss of money. Washington has no regard for Matthew vi, 26, "Behold the fowls of the air; for they sow not, neither do they reap nor gather into barns; yet your Heavenly Father feedeth them. Are ye not much better than they?" Changing the substantive of Matthew x, 31, might not Washington properly say: "Fear ye not therefore, ye are of more value than many swine"? Is the health of the people at large unimportant in comparison with that of wheat, cotton, poultry, swine, cattle and sheep? From a national point of view, as expressed by Washington indifference the answer appears to be, "Yes, we are a commercial nation." Contrast the outbreak of yellow fever in the gulf states, in 1905, and that of foot and mouth disease in New England, in 1902. For the eradication of the epidemic, Congress appropriated not a cent; to stamp out the epizootic it allowed five hundred thousand dollars, the greater part of which was paid to the owners of the cattle which it was necessary to slaughter and destroy.

Among the matters which it has been suggested should be placed under the control of a central health authority is the prevention of pollution of interstate waters. Any state can interfere with and prevent the pollution of water supplies within its boundaries, but neither one state nor the entire United States has power to prevent any state from pouring sewage into any stream flowing through it, even though that stream be used as a source of water supply for cities in another state. Massachusetts can not order New Hampshire and Vermont, nor can Connecticut direct Massachusetts, nor the United States any one or all of the four to cease discharging sewage into the Connecticut River, no matter how desirable it might be to draw on that stream as a source of drinking water and in spite of the fact that the pollution of an interstate body of water is more than of local importance. But the national government, while it has absolutely no sanitary supervision of inland water has complete control when it comes to questions of navigation. For an individual or a municipality or a state to interfere to the slightest extent with navigation of a stream would be a serious and even dangerous proceeding, but Washington has no authority to prevent interference with the purity of its water. The nation expends millions annually in deepening harbors and improving waterways for the promotion of commerce, but it can not, even if it would, without the consent of the states concerned, spend one cent to prevent them from becoming public sewers. The rights of the United States in respect to navigable streams and lakes are restricted to the control and regulation of commerce, and even then they are not sovereign or proprietary, for the supreme court has repeatedly determined that the individual states have the sovereign right to control the navigable waters within their respective boundaries. Purity of interstate waters can be conserved only by cooperation of the governments of the states concerned, and federal control can be granted only by constitutional amendment, and constitutional amendments are not the work of a day nor the outcome of the wishes of the few. The importance of undefiled water supplies is so great that it is not beyond the possibility of hope that some day we may see a strong movement for the protection of interstate waters, with public sentiment behind it.

Until very recently the movement for a central health organization has been promoted only by the medical men of the country, who, having never banded themselves into a political force, have never been able to secure that respectful attention of the law-making body that is so freely given to those in other lines of industry and usefulness, who back their demands with demonstrations of their voting strength. The dairy interests forced Congress to enact strict laws concerning the manufacture and sale of artificial butter and cheese and to impose revenue taxes on the manufacturers of and dealers therein. Organized labor has repeatedly succeeded in its demands for legislation favorable to its interests. The manufacturing, lumbering, mining, farming, fishing, grazing and other interests, secure the benefits of a protective tariff. But medical men, who, if they consulted only their own selfish pecuniary interests, would welcome an increase in the number of cases of disease to which they should be called, rather than measures to reduce the same and coincidently their pecuniary rewards, speak to deaf ears when they appeal for measures to protect the national health. Mindful of the dignity of their calling, they have not yet attempted, and never will attempt, to gain their ends through petty politics, but rather will they succeed through an aroused educated public sentiment. Public sentiment in health matters is commonly of discouragingly slow growth, but once started and established, the curve takes a sudden upward turn, as witness that of the universal interest in the eradication of tuberculosis, which knows not state nor national limits. And just as the tuberculosis movement has grown from a merely

medical into an economic, sociologic, and universally practical question, so eventually must the movement for a proper and adequate recognition of the importance of the national health. It is well, therefore, that the laity has begun to show its interest in the subject, and it is now that we must foster this interest in every way. How is this to be done? The answer is simple, the work difficult: The education of the great public. The American public thinks for itself and needs much more than mere statements; it requires demonstration and proof. Being practical, it wants to know of the promoters of a change in existing conditions what good it will do. It is suspicious of anything that savors of mystery or that appears to be difficult of explanation in plain terms by those who ought to know. But it is willing and even eager to be taught, when once its interest is aroused. By whom should this instruction be offered? The obvious answer is that the medical profession is the natural teacher of the great public in matters pertaining to health, but this is not wholly true; for, in the first place, many of the most influential of the moulders of public opinion in reference to the great problems of tuberculosis, housing of the poor, public parks and playgrounds, occupational hygiene, the employment of women and minors in factories, not to mention many others, are laymen; and, in the second place, the profession itself needs much enlightenment as to the value of state medicine, before it can qualify as the sole teacher of the laity. It was a lay commission who paved the way to the establishment of the first state board of health in America, by pointing out that the average length of human life was too short, that the annual waste of life could be largely reduced, that much sickness was preventable and that the thousands of unnecessary deaths, the millions of days of unnecessary sickness and the vast amount of unnecessarily impaired health and physical debility meant an enormous pecuniary and social burden which might be avoided: in short, that preventive medicine is a most comprehensive social and economic problem. It is very largely to philanthropic laymen and to students of economics that the credit for the world-wide movement against tuberculosis belongs. To undervalue the importance of the lay leaders and teachers in creating a public sentiment in favor of state medicine, is as short-sighted as to overrate that of a medical man who may have no adequate conception of the real functions of a public health office. The average medical man has no very clear conception of the value of a good system of sanitary bookkeeping or of the methods of applying the knowledge obtained by studying a mass of statistical data, and yet it is upon the registration of vital statistics that we must depend to determine the actual results of public health measures. In order to become an effective part of the educational force, he should so acquaint himself with the importance of a great central registration office as to be able clearly to demonstrate it. In time of trouble, the great mass of the people where vital statistics are kept recognizes the importance of a central office, be it municipal or state, where the health conditions of the community are noted from day to day. It understands that, without returns to show the incidence of the diseases dangerous to the public health, there can be no intelligent supervision when these tend to become epidemic, nor steps taken in time to prevent this tendency, by limiting the spread of the infection. And yet, what a small proportion of the states have any exact knowledge of the health conditions of any considerable areas within their limits! The disregard of registration of vital statistics in the country at large is a serious reflection on the intelligence of the public and of the profession. In not a few states, no certificates of death, no burial permits, no returns of death are required, and as an evidence of the political value of organization it may be noted that in one of the proudest and most enlightened of them all the associated undertakers were sufficiently influential to secure the defeat, during the last legislative session, of a bill providing for proper death returns and burial permits. In some places the neglect of sanitary bookkeeping is largely a disease of politics, but in many the unsatisfactory condition is due to the apathy and indifference of medical men. Who has not heard this indifference expressed in terms of dollars and cents? The making of returns takes time, and the compensation is nothing or insignificant; but a proper public spirit would neither begrudge the time nor claim the insignificant fee. If municipal or state authorities may be called on for advice and assistance, for free vaccine and antitoxin, for free examination of sputum for diagnostic purposes, may they not receive this scanty return? If we as a great profession have not yet brought about registration of vital statistics in any more than a very small minority of the states, if we have not yet taught ourselves and the public the value of that which is at the very foundation of sanitary legislation, we are in no position to urge the necessity of a central health office, with any hope of immediate success. We have first to educate ourselves, and then with the aid of the economists and other trained laymen educate the public in this as well as in other matters.

In arousing the public to a proper appreciation of the importance of public hygiene, we have far more to fear from professional than from lay ignorance. Professional ignorance of public hygiene does harm in two ways: first, by promulgating untrue and unscientific statements which are taken at their face value and spread broadcast; and, second, by causing those who later become correctly informed to become avowedly and vociferously skeptical concerning professional knowledge and opinion on basic principles. It is a curious fact that, generally speaking, the dogmatic misstatements of the imperfectly educated concerning the causes and methods of spread of diseases carry far more weight than the cautious, conservative opinions of the well-read scientist. This is no doubt due to the fact that the former has the courage of his ignorance and the latter the apparent timidity of scientific regard for accuracy.

It is the unskilled man in the public eye who is the most dangerous of all. It is a reproach and a scandal that in America as nowhere else the interests of the public health are entrusted so largely to men whose sole recommendation to public favor is the number of votes that they can influence or the political wires that they are able to pull for the winning side. Whereas, in England, every community of any considerable size employs a health officer who has had special training in public medicine, and gives him practically unlimited tenure of office, without regard to any of the demands of petty politics, in America, we hand our health matters very largely into the keeping of unskilled men, who know that the period of their connection with the service will be short—so short as not to warrant much endeavor along educational lines. Can we conceive of a less flattering sidelight on our intelligence? Is it any wonder that so few are willing to prepare themselves for public

service and venture into a field which shows so few signs of promise? And does the profession in general perform its whole duty to the community when it fails to show any concern about who shall be the representatives of preventive medicine? If the great public is to be called on to assist in securing adequate health legislation, it must be taught to recognize the importance of an efficient administration of local interests, of prompt application of all new knowledge relative to preventable disease, of the dangers incident to increasing density of population and increasing facilities of communication, and of other matters already touched on; and above all, it should be able to look with respect on those who, being placed in charge of the public health, should be qualified to give to the people intelligent opinions and advice thereon.

The creation of educated public interest in the national health is a duty which happily does not belong to any one class or calling. Each in his way can do his part, by precept and example. Of great value, as shown in the agitation for the law relative to foods, and here, there, and everywhere for the establishment of sanatoria and for ordinances against the spitting habit, are popular lectures, magazine articles and the sympathy of the press. Two years ago there was inaugurated at the Harvard Medical School a series of free public lectures, given on Saturday evenings and Sunday afternoons for four months, mainly on preventive medicine. The first series was a most gratifying success; the second so largely attended that at times more people were turned away than succeeded in securing places. The chief result is a widespread interest in public hygiene and a marked strengthening of the cordial relations which ought to exist everywhere between the profession and the public. The example set in Boston has been followed elsewhere with like results, and the more the habit spreads the sooner will the advocates of a federal health administration see a successful outcome.

Whether the proposed service shall take the form of a department represented in the Cabinet or of a division of an existing department with a commissioner for a chief, is of no very great importance, although there are some very obvious objections to the suggestion of a separate department, which can hardly apply to that of a division; but department or division, it could properly have as its nucleus the present Bureau of Public Health and Marine-Hospital Service, to which should be added various existing bureaus scattered about under different departments—some now duplicating the work of others—and additional bureaus to be created. Its head should be charged with advisory powers in relation to other departments and to the states, and with supervisory and executive powers in matters pertaining to his own bureaus. He should not attempt to meddle in local matters not of national concern, nor to encroach upon the duties of other branches of the government. While he should be entrusted with all affairs relating to public health, he should have no control whatever over the medical service of the Army and Navy either in peace or in war, as has sometimes been suggested he should.

He should not be restricted in the selection of those to whom he would entrust the investigation of large problems of sanitary importance, but should as occasion requires draw on the whole scientific world, if necessary, to secure experts who would not accept permanent government employment or be on regular salary. Without such freedom he could hardly expect to compete in experimental research with educational institutions and the various scientific foundations.

He should be empowered to call on other departments for statistical data and to cooperate with the states in carrying on inquiries of interest to any or all of them. He should give attention to the hygiene of occupation, to questions of woman and child labor, to the hygiene of infants, to the hygiene of schools, and to many other problems of general interest. He should collect the vital statistics of the entire country, enforce the laws relative to quarantine, food and drugs and meat inspection, and perform such other duties as properly belong to a great national health organization.

Inasmuch as no one man could be expected to conduct so great an establishment with only the advice of his bureau chiefs, and inasmuch as the cordial cooperation of all the states would be absolutely essential to satisfactory achievement, he should have a national council consisting of one delegate from each state, appointed by the governors or state boards of health for a term of years. Such a council should be composed of men of recognized standing in medicine, engineering or other branch of learning which would be of assistance. It should be called together at least once each year and as much oftener as might appear to be necessary, and the expenses of each such meeting should be borne by the government rather than, as now is the case with the annual conference of the state boards of health with the surgeon general of the Public Health and Marine-Hospital service, at the expense of the states or of the delegates themselves. At each meeting the subject of the national health should be discussed and proposals for future work should be made and considered. Even though at times the meetings might not appear to be of great scientific value, at least they would serve to promote the cordial feeling that the individual states form a part of the administration and exercise a proper influence.

INDOLACETURIA.

C. A. HERTER, M.D.
NEW YORK CITY.

In the course of investigations made on the urine of a child suffering from a chronic intestinal bacterial infection, it was noticed that the addition of concentrated hydrochloric acid to the urine led to the development of an intense rose color. The study of this color reaction showed it to be identical with the reaction described in 1882 by Nencki and Sieber as the urorosein reaction.[1] Although there has been considerable discussion as to the nature of this reaction, its exact nature has, up to the present, been left in obscurity. In the course of my study of the patient just mentioned it was determined that the mother substance or chromogen from which the urorosein is derived is a definite substance arising in the intestinal tract from the breakdown of tryptophan by bacteria. This substance is indolacetic acid. Further study has shown that the occurrence of indolacetic acid in the urine is not a rare occurrence and that it is usually associated with pathologic conditions of the intestinal tract. For this reason it has appeared to me worth while to bring together here such facts as have now come to light.

I have ventured to designate by the term indolaceturia the presence of indolacetic acid in the urine. The term

1. Jour. f. prakt. Chem., 1882, xxvi. 333.

is somewhat awkward and perhaps in other respects not without objection, but nevertheless I think it advantageous to make use of this term, as otherwise one is constantly confronted with the inconvenience of designating the condition by circumlocution.

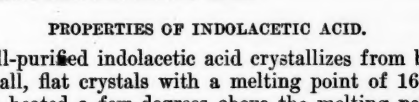
It is desirable to sketch at the outset the characteristics of a urine containing indolacetic acid, in appreciable quantity. If to such a urine there be added an equal volume of concentrated hydrochloric acid, one of two results may be looked for: either the urine develops promptly a fine rose-red color which deepens in intensity during the first few minutes, or there is no development whatever of the rose-red color. In making this statement it is assumed for the moment that the urine does not contain indoxyl potassium sulphate in sufficient concentration to give rise to the occurrence of an appreciable color reaction from the presence of indigo. Urines occur which, on addition of concentrated hydrochloric acid, do yield indigo in sufficient amount to distinctly obscure the rose-red reaction, and it is necessary in such cases to resort to a special procedure in order to make the distinction certain between the presence of indolacetic acid and an indoxyl compound. The explanation of the different behavior of urines containing indolacetic acid toward concentrated hydrochloric acid is simple. If we make a watery solution of indolacetic acid or one of its salts and add to it concentrated hydrochloric acid, there is no change in color; but if we now add to the mixture some suitable oxidizing agent, as, for example, one or two drops of a 0.1 per cent. solution of potassium nitrite, there is instantly developed the characteristic rose-red color. Experimental study has shown that those urines which yield the typical indolacetic acid color reaction on the addition of concentrated hydrochloric acid contain traces of nitrites. These nitrites are formed through the action of nitrifying bacteria in the urine,[2] possibly from the breakdown of urea, but more probably from the action of these bacteria on compounds of ammonia normally present in every urine. Since a mere trace of the nitrite is all that is necessary, in the presence of hydrochloric acid, to give rise to the rose-red or urorosein color, it may happen that the urine is not greatly clouded by the presence of nitrifying bacteria. It is noteworthy that the quite fresh urines from persons showing the urorosein reaction will not develop the color reaction without the addition of nitrites, whereas the same urines on standing in the laboratory for twelve or twenty-four or forty-eight hours will frequently give rise to the reaction, without the addition of a nitrite.[3]

It is possible that other oxidizing agents than nitrites at times play a part in the production of the color reaction. At present I know of no substance occurring naturally in the urine which will take the place of the nitrites in oxidizing the indolacetic acid chromogen with the typical resultant color reaction. The chief practical interest of the fact that nitrites are able to oxidize the indolacetic acid so as to yield the typical rose-red color lies in the circumstance that one may wholly overlook the presence of a considerable and significant amount of indolacetic acid in the urine simply by failing to add the necessary trace of a nitrite to the urine to be tested. Observers who in the past have found the urorosein reaction to be present in the urine have generally detected it simply by the addition of concentrated hydrochloric acid. In other words, the nitrites necessary for oxidation have happened to exist in the urine. I have found the indolacetic acid reaction many times present in urines which failed to give the reaction on the addition of hydrochloric acid alone, and its presence has been detected simply through the use of sodium nitrite or potassium nitrite.

It is worth while to consider briefly the chief properties of indolacetic acid as contrasted with the properties of the urorosein colored substance resulting from the oxidation of indolacetic acid through the action of hydrochloric acid and nitrous acids.

PROPERTIES OF INDOLACETIC ACID.

Well-purified indolacetic acid crystallizes from benzol as small, flat crystals with a melting point of 164° C. When heated a few degrees above the melting point it breaks down into carbon dioxid and skatol, a property of much value for the identification of the substance. This occurrence is indicated in the following equation:



Indolacetic Acid. Skatol.

Indolacetic acid is very slightly soluble in cold water, easily soluble in alcohol and in ether, less easily soluble in chloroform and only slightly soluble in benzol. A solution of indolacetic acid when acidified with hydrochloric acid develops a violet color on heating in the presence of a very small quantity of ferric chlorid. A solution of indolacetic acid of the strength of 1:10000 behaves in this way. This reaction was first described by Salkowski,[4] who regarded it as especially satisfactory for the recognition of indolacetic acid or, as it was formerly called, skatol-carboxylic acid. If to a watery solution of indolacetic acid (1:1000) there be added a few drops of nitric acid (specific gravity 1.2) and a few drops of a 1 per cent. solution of potassium nitrite be added, the solution develops a cherry or rose-red color, according to the concentration of the indolacetic acid. The coloring matter thus developed may be sufficiently abundant to separate out. It is the coloring matter known to Nencki and Sieber as urorosein. The gradual development of a purple-red may be obtained by adding to the watery solution of indolacetic acid (1:1000) an equal volume of hydrochloric acid (specific gravity 1.2), to which is then added a few drops of a 1 per cent. solution of chlorid of lime. If instead of using chlorid of lime one employs a 1/10 per cent. solution of potassium nitrite, there is a gradual development of the urorosein color, and this method is the most satisfactory for detecting the presence of indolacetic acid in the urine. A solution of indolacetic acid, when boiled with a solution of paradimethylamidobenzaldehyd (Ehrlich's aldehyd), dissolved in hydrochloric or sulphuric acid, gives rise to a red color differing from the color obtained by the action of this reagent on indol in being both far less sensitive and in presenting a less purplish tinge. On boiling a watery solution of indolacetic acid with Millon's reagent, a yellow color is obtained.

2. The relation of Nitrifying Bacteria to the Urorosein Reaction of Nencki and Sieber, Jour. Biol. Chem., 1908, iv, 239.

3. There are occasional exceptions to this rule, due to the fact that the urine may contain a trace of a nitrite when freshly voided.

4. Ueber das Verhalten der Skatolcarbonsaüre im Organismus, Ztschr. f. physiol. Chem., 1885, ix, 23.

PROPERTIES OF THE UROROSEIN COLORING MATTER.

The urorosein coloring matter as obtained by the action of strong hydrochloric acid and potassium nitrite on indolacetic acid is a rose-red or cherry colored substance which has the property of passing readily into amyl alcohol. It passes somewhat less readily into propyl alcohol, but can be satisfactorily extracted, especially if salted out. The spectroscopic examination of the red amyl alcohol solution shows the presence of a characteristic absorption band in the green portion of the spectrum, its location being somewhat nearer the sodium line D than the line E. On treating the urorosein coloring matter with zinc and hydrochloric acid, it is readily reduced to a colorless substance, but through a cautious use of oxidizing agents the original color may be partially restored. The chemical constitution of the urorosein coloring matter has not been established. It is possible that it is a nitroso-indolacetic acid analogous to the nitroso-indol formed by the action of nitrites on indol. As, however, a similar and possibly identical coloring matter may be obtained through careful oxidation of indolacetic acid by means of other oxidizing agents than nitrous acid, it is not clear that we are justified without further study in regarding the urorosein reaction as due to the formation of nitroso-indolacetic acid.

METHODS OF TESTING URINE FOR THE PRESENCE OF INDOLACETIC ACID.

When the urine contains a moderate quantity of indolacetic acid—say 0.001 to 0.01 of 1 per cent.—the addition of an equal volume of concentrated hydrochloric acid and the careful addition of a few drops of a 0.2 per cent. solution of potassium nitrite suffices to bring out the urorosein reaction in an unmistakable manner. When the quantity is smaller or where other coloring matters exist in the urine, it may be less easy to establish the presence of indolacetic acid. Whenever any doubt exists as to the nature of the reaction suspected to depend on indolacetic acid, the following procedure should be employed: One hundred cubic centimeters of the urine should be evaporated to a volume of 20 c.c. After cooling, this concentrated urine should be carefully filtered. The filtrate is acidified with 1 c.c. of a 10 per cent. solution of phosphoric acid. This acidified and concentrated urine is now placed in a separatory funnel and extracted with from 40 to 50 c.c. of ether. It is not necessary to shake the funnel for more than five minutes, as any indolacetic acid that may be present will promptly pass in large part into the ether. After allowing the contents of the funnel to stand until a good separation takes place between the urine and the ether, the ethereal extract is drawn off and evaporated on the water bath. The residue is taken up in 5 c.c. of water, and to this solution is now applied the test with concentrated hydrochloric acid and potassium nitrite. It frequently happens that urines which show only a moderate and obscure urorosein reaction, when the test is applied directly to them, yield an ethereal extract which gives a beautiful and typical reaction. With some urines there is difficulty in making a clean separation of the ethereal layer, owing to the formation of an emulsion, and in such cases a good separation can be brought about by the use of the centrifuge.

Urines which contain an abundance of indican develop enough indigo on oxidation with a nitrite to obscure the reaction dependent on indolacetic acid. The indigo that is separated may advantageously be removed from the solution by shaking with chloroform. The super-natant fluid then shows the characteristic rose color due to the oxidation of the indolacetic acid and, after decanting this colored urine, the color may be shaken out into amyl alcohol. Indigo red, as well as indigo blue, passes over into chloroform if the former happens to be present with the latter, and in all cases in which indoxyl derivatives are present in the urine it is best to concentrate the latter and extract with ether as above described.

It is necessary to use some care in employing the nitrites for the development of the urorosein reaction. Even urines which contain no indoxyl potassium sulphate (if one may judge by the inability to obtain indigo by means of the ordinary reagents, such as Obermeyer's) may develop a purple or violet color in place of the typical rose-red color. This variation in color from the typical rose-red has been found in some instances to be due wholly to the mode of oxidation with potassium nitrite. This is very clearly indicated when, through the cautious addition of nitrite, the typical rose-red color is developed in the upper portion of the test tube, whereas the violet color appears in the lower part where oxidation is less active, all transitional tints being observed between these two levels. As already stated, it is preferable to add the nitrites in very dilute solutions after strong hydrochloric acid has been added to the urine (or the extract of the urine) instead of previous to the addition of the hydrochloric acid.

I have observed a few instances in which the mere addition of concentrated hydrochloric acid to the urine has been followed by the appearance of an intense greenish-blue or blue color, due to the presence of indigo. This phenomenon has been observed by me only in urines obtained from children suffering from severe gastroenteritis, although I have occasionally seen slighter manifestations of the same phenomenon in the urines of adults. In the cases in which this development of indigo has occurred, the excess of hydrochloric acid employed has always been great. In such cases the indigo must be shaken out with chloroform before the addition of the nitrite or, preferably, the urine should be extracted with ether.

The quantitative estimation of indolacetic acid can only be made with considerable difficulty, and I shall not here discuss the technic to be employed in the endeavor to recover the greater part of the indolacetic acid present in the urine. The greater part may, however, be recovered by suitable methods of extraction. For practical purposes it suffices to dilute the urine in any case of marked indolaceturia to a point at which it no longer gives a trace of urorosein on the addition of hydrochloric acid and potassium nitrite. The dilution required to cause a disappearance of the reaction can then be compared with the dilution at which an indolacetic acid solution of known strength ceases to give the reaction. It has been found by experiment that indolacetic acid in a solution holding one part of the acid in one hundred thousand parts of water still gives a faint color reaction. The highest estimated percentage of indolacetic acid in any urine yet observed by us has been 0.05, or 0.5 gram to the liter.

CLINICAL STATES ASSOCIATED WITH THE PRESENCE OF INDOLACETURIA.

A thorough study of the clinical states associated with indolaceturia has not yet been made. The system-

atic search for the presence of indolacetic acid in the urine through the use of strong hydrochloric acid and potassium nitrite will certainly bring to light many instances of indolaceturia which would be overlooked where strong hydrochloric acid is alone employed. The most pronounced examples of indolaceturia that have come to my notice have been in urines from patients with diabetes, typhoid fever or chronic enteritis. I have observed a strong reaction for indolacetic acid in some cases of jaundice. Rosin found the urorosein reaction to be strong in many cases of pulmonary phthisis, and Garrod observed it in the urine of chlorotic patients. I believe that small quantities of indolacetic acid in the urine are common among chronic disorders of digestion. Various observers have noticed the occurrence of the urorosein reaction in osteomalacia, nephritis, carcinoma, ulcer of the stomach and perityphlitis. Dr. Baldwin has noted a strong reaction in the urine of a patient suffering from the vomiting of pregnancy.

For reasons which will appear in connection with the discussion of the pathologic significance of indolaceturia it is clearly desirable that in routine examinations of the urine, the tests for indolacetic acid should be applied. It is also desirable that a record should be kept of the relationship existing between the intensity of the reaction for indolacetic acid and the intensity of the reaction for indigo blue.

THE PHYSIOLOGIC AND PATHOLOGIC SIGNIFICANCE OF INDOLACETURIA.

An insight into the physiologic and pathologic significance of indolaceturia has been made possible by the researches of Hopkins and Cole[5] and of Ellinger[6] on the constitution of tryptophan. Tryptophan, which may with a high degree of probability be considered as indolamino-propionic acid rather than as skatolaminoacetic acid, is set free early in tryptic digestion of proteids. Normally, it is promptly absorbed from the intestine and either burned in the body with the formation of products not at present known, or appropriated in some synthetic process. Any obstacle or delay in the absorption of tryptophan favors decomposition by intestinal bacteria. *B. coli* certainly, and *B. bifidus* probably, are able to form indolacetic acid from tryptophan. It is certain also that many bacterial symbiotic combinations in the intestine are able to make indolacetic acid from tryptophan. It is noteworthy that indolacetic acid is liable to be absorbed as such when it has once been formed in the intestinal tract, and it is further noteworthy that this substance is relatively resistant to the ordinary biologic processes of oxidation. Hence it is not surprising that the decomposition of tryptophan in the intestinal tract should be followed by the appearance of indolacetic acid in the urine. The acid probably appears in the urine as the salt of some common base and does not undergo any pairing with sulphuric acid or glycuronic acid. At present, at least, there is no evidence that such pairing occurs.

As both indol and indolacetic acid are derived from tryptophan and from tryptophan only, it is plain that there must be a reciprocal relation between the formation of indolacetic acid and of indol. Thus if the indol production from tryptophan be large, the opportunity for the production of indolacetic acid will be less than would otherwise be the case, and, *vice versa,* if indolacetic acid be formed in large amount, there is less opportunity for the production of indol, since there is at the present time no evidence that indol is ever derived from indolacetic acid. Only when the tryptophan available is abundant in the intestine as the result of delayed absorption can we expect to get both indol and indolacetic acid in abundance. Clinical experience is wholly in harmony with this view. When indolaceturia is most marked, indicanuria is not apt to reach the high grades of intensity sometimes observed when indolaceturia is absent. On the other hand, indicanuria of the most intense type is not apt to be associated with the highest degree of indolaceturia.

In one patient whom I have long had under observation, there was at one time a persistent and extreme indicanuria. Very slowly, as the patient showed improvement in the digestive trouble to which he was subject, there developed an intense indolaceturia which was long persistent and appeared to be at the expense of the indicanuria, since the latter gradually disappeared wholly. This behavior is intelligible if we assume that the breakdown can occur only through two paths, either (1) by way of indolacetic acid or (2) by way of indolpropionic acid. There are reasons for thinking that the latter is the source of indol, while it is extremely doubtful if indolacetic acid ever breaks down with the production of indol. We do not yet know under what conditions and through what stages of decomposition indolpropionic acid yields indol. It is clear, however, that indolpropionic acid is much less stable than indolacetic acid and is more readily attacked by bacteria. I have made many experiments in order to see whether the bacterial breakdown of indolacetic acid will yield indol, and have never been successful in obtaining indol from this resistant substance, even when it has been exposed to the action of powerful indol producers. This fact strengthens me in the belief that indol is derived from indolpropionic acid and not from indolacetic acid.

Although there is no evidence that indolacetic acid yields indol through the action of bacteria, it is probable that under special conditions it does give rise to skatol. I have made numerous observations with culture media containing indolacetic acid, but no substance capable of yielding tryptophan, in the hope of obtaining skatol through the action of anaërobic skatol-producing bacteria. I have failed to obtain up to the present time any unequivocal evidence of the origin of skatol from indolacetic acid by means of bacteria. There remains, however, the important fact that through potash fusion and through the mere heating of indolacetic acid slightly above its melting point, this substance decomposes into skatol and carbon dioxid. For these reasons it is chemically reasonable that skatol should be derived from indolacetic acid.

It is thought by some investigators that the urorosein of the urine is identical with skatol-red, which is a coloring matter derivable by the addition of strong hydrochloric acid to the urine of animals or patients that have been fed on skatol. Thus Porchet and Hervieux[7] have recently maintained that urorosein and skatol-red are identical. They base this contention mainly on the fact that the skatol-red which appears after the administration of skatol to dogs gives the same typical spectroscopic band that is obtainable when the urorosein pig-

5. The Constitution of Tryptophane and the Action of Bacteria on it, Jour. Physiol., 1903, xxix. 451.

6. Ueber die Constitution der indol Gruppe im Eiweiss (Synthese der sogen. Skatolcarbonsaüre) und die Quelle der Kynurensaüre, Ber. d. deutsch. chem. Gesellsch, May 4, 1906; No. 7, p. 1802.

7. Untersuchungen über das Skatol, Ztschr. f. physiol. Chem., 1905, xlv, 486

ment is subjected to spectroscopic examination. I have elsewhere given in some detail the reasons which show that skatol-red and the urorosein reaction do not depend on the presence of the same mother substance in the urine.[8] Since discussing this subject I have been able to demonstrate the dependence of the urorosein reaction on the presence of indolacetic acid in the urine. When this fact is realized by the writers who maintain that skatol-red and urorosein are identical it is evident that this contention will have to be abandoned.

The view that indolacetic acid arises from the decomposition of proteids in the intestinal tract is supported by the fact that I have been able to obtain from the intestinal contents of a patient showing a marked indolaceturia a substance showing the reactions for indolacetic acid. I have not yet, however, had the time to prepare this substance from the intestinal tract in sufficient quantity to make melting-point determinations and to demonstrate the formation of skatol on subjecting the substance to a temperature in the neighborhood of 180° C., these being the criteria which serve positively to identify indolacetic acid. It is entirely in harmony with the view that indolacetic acid arises from tryptophan decomposition in the intestinal tract that I have been able to induce a strong urorosein reaction in the urines of two healthy subjects who during several days ate a large excess of beef—from 3,000 to 4,000 grams daily. Previous to the eating of the beef in excess, the urines from these subjects failed to show the presence of indolacetic acid. My explanation of this induced indolaceturia is that in both instances the presence of such large quantities of proteid in the intestine gave rise to a delay in the absorption of tryptophan formed through digestive proteolysis and that in consequence of this delay indolacetic acid was formed through the action of bacteria on tryptophan. This observation leads me to suspect that there are instances of pathologic conditions in which the excessive use of proteins is at least a factor in the development of indolaceturia. I would refer in this connection particularly to two types of cases, namely, diabetes and certain instances of chronic intestinal indigestion in children. In diabetes there is a tendency for patients to restrict themselves in carbohydrates and to compensate for that restriction by increasing the fat and protein intake. The protein intake under these conditions may be 50 or 100 per cent. greater than would be the case in health. The same thing is true of a group of cases of chronic intestinal indigestion in children in which it is impossible to take more than very small quantities of carbohydrates without excessive and detrimental fermentation. These patients, moreover, are frequently unable to tolerate fats in normal amounts. Under such conditions the physician tends to recommend a diet rich in protein.

It thus appears probable that the excessive feeding of proteins may be concerned with the development of indolaceturia. I do not maintain, however, that this is essentially the cause of the indolaceturia in the two classes of cases just mentioned. For I have seen the phenomenon in persons who are taking no excess of protein food. Moreover, in pathologic cases of indolaceturia, in which the protein food has been restricted, the indolaceturia may be still persistent. It is thus clear that, while the intake of a large amount of protein is a factor highly favorable to the development of indolaceturia, the occurrence of this condition must be regarded as depending rather on delayed absorption of tryptophan and suitable bacterial conditions than on mere overfeeding with proteins.

Assuming that the hypothesis set forth in this paper is correct and that both indolacetic acid and the indol formed in the intestinal tract are derived from tryptophan through the action of bacteria, the fact remains still to be accounted for that sometimes the decomposition of tryptophan yields mainly indolacetic acid and at other times mainly indol. I am at present unable to offer a satisfactory explanation for this selective breakdown of tryptophan. As is well known, bacteria of the *B. coli* group are capable of clearing tryptophan to indol and, as already mentioned, it was shown by Hopkins and Cole (an observation confirmed by Dr. Dakin and myself) that these organisms are able to form indolacetic acid from tryptophan. It is doubtless true that in the intestinal tract the bacteria associated with the colon bacilli play a part in determining the direction of the main cleavage of tryptophan, and I think it possible that through the careful study of the symbiotic action of bacteria on this substance it will be possible to gain an insight into the different bacterial conditions that determine the production of indolacetic acid rather than indol.

It is not my intention here to discuss the pathologic consequences of indolaceturia. I may point out the fact, however, that, since indolacetic acid is not paired in the organism like indol and skatol and phenol, it may have an opportunity to act directly on the nervous system when absorbed in considerable quantities. A comparison of the action of indolacetic acid, both on the muscle functions and the functions of the central nervous system with the effects produced by indol and skatol, is thus a distinct desideratum. Dr. Lee, who has interested himself in the effects of indol and skatol on muscle fatigue, has kindly offered to study the effects of indolacetic acid on the living muscular substances. I have not yet had sufficient experience in the therapeutic modification of indolaceturia to express any opinion as to the best method of ridding the organism of this condition, but in any scheme of treatment the diminution of protein food would have to be considered.

8. Indolacetic Acid as the Chromogen of the "Urorosein" of the Urine, Jour. Biol. Chem., 1908, iv, 253.

Original Articles

STREPTOCOCCIC INFECTIONS OF THE PHARYNGEAL ADENOID TISSUE IN ADULTS.*

ALICE G. BRYANT, A.B., M.D.

Otologist and Laryngologist to the New England Hospital for Women and Children; Otologist and Laryngologist to the Pope Dispensary.

BOSTON.

This subject is of sufficient interest and practical importance to receive at the hands of the laryngologist much more careful consideration than it has in the past. I am not sure whether these streptococcic infections of the pharyngeal adenoid tissue in adults are thought of or even clearly recognized by the general practitioner. The basis of this paper consists of data

* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908

collected in ten cases, occurring in my own private practice.

There never was a period when, more than now, the laryngologist devoted time, ingenuity and skill to refining his instruments, extending his view of experimental and research work, and perfecting a multitude of operations. May not one think that we have been over-zealous in our activity to reconstruct the nose and to devise new ways to explore the nasal sinuses and cells, and to peer into remoter regions of the esophagus, stomach and bronchial tubes? Thereby, are we not peculiarly tempted to lose sight of the older and more familiar fields?

In 1868 W. Meyer first drew attention to the importance of the clinical aspects of the pharyngeal adenoid tissue. No subject in our line up to the present time has received more widespread attention. Next to no information can be gleaned from text-books. Though a careful research of the literature has been made, the scientific papers scattered throughout the medical journals offer but scanty material upon this topic.

Let us consider, for a moment, how sometimes the naso-pharyngeal condition may be overlooked or little importance may be attached to it. This statement may seem paradoxical, but it shows how easily we may be led astray when symptoms are misleading or simulate, perhaps, some general diseases, as pulmonary tuberculosis, malaria, typhoid fever or influenza, thus masking the original seat of the trouble. This is obviously true in cases of differential diagnoses.

It is hardly possible to overstate the importance of direct examination of the postnasal and nasal regions to settle any debated question where septic conditions are present that cannot be attributed clearly to some one definite region of the body. Another safe rule to follow is to have bacteriologic examinations made of these regions; and lastly, the thermometer might throw some light on many doubtful cases of general disturbance where the nasopharynx is the primary site of infection.

I will outline a case with obscure symptoms due to an unrecognized throat trouble.

CASE 1.—*History.*—Miss A., authoress, aged 30, was sent to me in November, 1904. Three months previously she had had an attack of influenza. This passed off, and the patient reported herself as slowly regaining her usual state of health. But two weeks previous to her visit there had been a rise of temperature each evening, ranging from 100.5 F. to 101.5 F., with a slight elevation in the morning. She had been examined carefully on two or three occasions for a possible pulmonary involvement, but always with negative results. It was stated that the throat felt a little sore, with a slight increase in postnasal secretion, and for a day or so the voice had become slightly nasal and husky.

In addition, a cough developed, and masses of yellowish white, opaque material, a centimeter or less in diameter, were expelled freely. The patient had noticed no bad taste or disagreeable odor, nor was it necessary to use the handkerchief more frequently than usual. At no time during her convalescent period had she felt ill enough to go to bed.

Examination.—The larynx was examined. It appeared slightly reddened. The nasal membranes were inflamed, but no undue amount of secretion was present in the meatuses, and the maxillary sinuses were clearly illuminated. The soft palate and uvula and posterior pillars and pharyngeal walls showed marked swelling and redness. The tonsils were swollen, very slightly inflamed, with no exudate or membrane covering them. Posterior rhinoscopy brought into view the adenoid tissue covered with secretion of creamy consistency. This was cleared away by a saline spray. The adenoid tissue looked "rat-eaten," and only one-third of it remained, and this remnant finally came away with the slightest touch of the forceps.

The bacteriologic examination showed streptococci in abundance, and the masses that had been expelled were remains of adenoid tissue.

The constitutional symptoms disappeared, and the local signs cleared up promptly under appropriate treatment.

In the following case, the symptoms were not particularly misleading, but they were unusual in their severity and rapid onset:

CASE 2.—*History.*—A physician unduly exposed to septic infection became ill May 5, 1907. The illness was ushered in by chilly sensations and a rise of temperature to 104 F. on the afternoon of the first day. General malaise, headache and anorexia soon followed, with indefinite pains about the postcervical region. For three or four days the temperature rose from 99.5 F., or thereabouts, in the morning to 102 F. or 102.5 F. by 6 p. m. The pulse meantime was irregular, soft and rapid, ranging from 85 to 115. The symptoms generally seemed to simulate an attack of influenza, for which it might have been taken. But at this time the soft palate was slightly painful, as were also the posterior pillars. In less than two days, the pain in the throat became very severe after using the voice or on deglutition. At night it was sufficiently severe to prevent sleep.

Examination showed the pharyngeal walls to be red and swollen. The uvula, soft palate and posterior pillars were markedly red, swollen and edematous. The laryngeal condition presented nothing beyond a general redness and the nasal condition was similar. It was only toward the end of the illness that the nose was secreting freely, which was traced to the postnasal condition. At the end of five days the pain in the throat became paroxysmal. It was slightly relieved by clearing the postnasal region, aided by very warm normal salt solution, in addition to a decided muscular effort. Later, the pain abated somewhat for half an hour, following the expulsion of pieces of soft friable tissue of a pinkish color. On the fifth, sixth and seventh days of the illness, three such pieces of tissue were expelled, varying in diameter from 2 to 3 centimeters. A fourth piece came away immediately after a postnasal application.

Postnasal examination showed intensely swollen pharyngeal walls with a small amount of adenoid tissue remaining. At a previous examination some four years ago this patient was known to have had only a small adenoid that in no way blocked the choanæ.

Bacteriologic examination gave a pure growth of streptococci, and the microscopic examination of the expelled tissue, as reported by Dr. Elizabeth Morse, showed several pieces of opaque white, firm material, composed largely of débris, fibrin network and dense collections of pus cells. In some areas there is a delicate reticulum containing in its meshes polymorphonuclear leucocytes and a few lymphoid cells. Except for the latter, no fixed cells are seen. No blood vessels.

This case yielded promptly in three weeks to nasal and postnasal applications and sprays and to appropriate general treatment.

In a third case where the symptoms pointed to the throat but the exact location was overlooked.

CASE 3.—*History.*—Mr. C., a lawyer, consulted me in January, 1906. He had been exposed to a severe case of scarlet fever in his own family. He had never had influenza and gave no history of nose or throat trouble. However, he had had a sore throat for four days previous to his visit to me. There was general malaise and marked pain in his throat, and also at the back of his neck. There was slight soreness on swallowing, and more or less blocking of the posterior nares. The patient had become nervous and irritable. There was a rise of temperature, never reaching over 102 F. in the evening, with exacerbations each day. The respirations were not much above normal; the pulse beat was accelerated, but otherwise not abnormal. Prior to coming under my care he had been treated by incisions, first in one posterior pillar and then in the other. Finally, the tonsil was incised at its apex in the

hope of finding deep-seated pus. This procedure proved fruitless and only increased his discomfort.

Examination.—I saw him a day later, when there was most extensive swelling of the uvula, soft palate and posterior pillars. The tonsils were only slightly reddened. Anterior rhinoscopy brought into view reddened mucous membrane. There was no secretion in the meatal recesses and the antra showed up well under illumination. An examination of the postnasal region showed a yellowish white mass in the region of the adenoid. A very warm saline spray was used, when friable pieces of material one-fifth of a centimeter in diameter came away freely, leaving the base of the adenoid very uneven in outline.

This case was treated similarly to the others, and within two weeks the throat symptoms had subsided. It may be well to note that I had seen this patient some three years ago, when he was referred to me for the removal of impacted cerumen. At this time, it was recorded that the adenoid tissue was small in size.

In presenting these cases I have reported a sufficient number to illustrate the points I desired to note; and these three cases were the most pronounced of all. I am convinced that such cases are likely to be comparatively rare. In addition to the above there are seven others on my records, but to detail them would be only a repetition of the foregoing, with symptoms very much less marked. I may mention that the ages ranged from 30 to 50 years. In no case were the ears involved, nor was there an enlargement of the cervical glands. All the patients recovered.

In this brief paper no attempt has been made to go into exhaustive details of the cases, or to approach the subject otherwise than as met with in adult life. To study this subject in infancy or in early years might well furnish material for special papers. However, incomplete as it is, it may further in other workers more searching and fruitful investigation.

It needs no homily to convince us of the value and importance of this subject in the rôle played by the streptococcic infections of the pharyngeal tissue, not only in their local, but also in their remoter effects, whether the symptoms are definite or obscure.

My best thanks are due my colleague, Dr. Katharine H. Law, who kindly looked over the literature of the last fifteen years.

DISCUSSION.

DR. B. R. SHURLY, Detroit, said that the serious sequelæ and complications of the infectious diseases, such as influenza, typhoid fever, diphtheria, scarlet fever, measles, tonsillitis, arthritis and others are in direct ratio to the absorption of toxin from the nasopharyngeal space. This pathologic and therapeutic principle is not sufficiently recognized by the average general practitioner. Acute infections of the lymphoid ring, especially those of the streptococcic variety attended by high temperature, myalgia and glandular swelling, naturally fall within the realm of bedside medicine. In private practice it is rare that in acute cases of this type the patients are subjected to rhinoscopic examination; unless throat trouble is evident on a simple inspection, other and more remote regions of the body are investigated. If complications arise, the internist or pediatrist is called, as the laryngologist of the last decade is usually a surgeon and not a clinician. Dr Bryant's plea for a return to the older and more finished field is a plea for more laryngologists who have been trained in the hard and fascinating school of general practice. To carry out this examination satisfactorily at the bedside, as a routine measure requires more inconvenience than the busy internist will suffer. From the view point of the rhinologist, however, no examination could be complete without posterior rhinoscopy. The three cases reported are types of acute infections that occur in enormous numbers through the winter and early spring of our northern climate. They are classified popularly as influenza. Depending on innumerable factors such as the variety of bacteria, virulence, age, resistance of the patient and area of lymphoid tissue infected, these epidemics are attended by a train of similar symptoms. The clinical picture changes in relation to the bacteriologic findings. Streptococcus and pneumococcus in pure culture rank second only to influenza as serious complication. Dr. Bryant reports no involvement of the middle ear in her series of cases, although this particular variety of infection is extremely liable to extension. The cases described gave evidence of acute inflammation in the throat as well as the adenoid involvement. There was streptococcus infection while the individuals were in a state of so-called lowered resistance from various causes. Case 1 illustrates a type that is frequently classified as recurrent influenza by the general observer and which may be scientifically classified as chronic influenza in many cases. This condition is a distinct entity as a pulmonary disease, and is differentiated with great difficulty by physical signs and symptoms until a special stain reveals the influenza bacillus. Acute inflammations or chronic inflammations of the lymphoid ring due to this bacillus lead to marked susceptibility of the mucous membrane to mixed infection with pyogenic micro-organisms. A chronic influenza of an adenoid may exist for weeks after an attack that is looked on as a simple nasopharyngitis. Cases 2 and 3 illustrate frequent types of acute infection that follow work in the postmortem room or among septic wards of hospitals. Those who have served at length in the contagious departments, especially among scarlet fever patients, can recall many cases among physicians and nurses of streptococcus infection. They are usually of attenuated forms and respond readily to treatment. Dr. Shurly agreed with Dr. Bryant that in acute infections of the type under discussion, the old time spray of Seiler's or Dobell's solution or warm boric acid solution is exceedingly grateful and beneficial to the patient. Gentle irrigations of salt solution or compound antiseptic powder U. S. P. with a post-nasal syringe are useful. While many cases respond promptly to irrigation, sprays and internal medications, a few persistent cases of streptococcic infection of the pharyngeal adenoid and adjacent structures may require the aid of bacterial vaccines. In Dr. Shurly's experience it has proved of value in several threatening cases of erysipeloid variety. Stock vaccine may be used when time or inadequate laboratory facilities will not permit the more successful opsonins to be prepared for the individual, and the proper treatment of acute infection in this region will limit the complications and therefore the surgery of the sinuses. Prevention of acute adenoiditis by the removal of the diseased gland or other prophylactic measures demand more universal attention. Dr. Shurly asked Dr. Bryant if these cases had been investigated by culture methods, especially for the Pfeiffer bacillus.

DR. EMIL MAYER, New York, said that adenoid vegetations in adults are far too frequently neglected. He emphasized not only that this infection occurs in the adult, but also that the adenoid vegetations should be more frequently recognized than they are. We have not only this class of infections in the adenoid tissue, but also a direct inflammatory affection which physicians have been treating for years as ordinary coryza, ordinary pharyngitis, or an ordinary tonsillitis, perhaps only treating the pharynx and neglecting far too frequently the presence of adenoid vegetations. He has a number of adult patients with adenoid tissue quite as large as that found in young children.

DR. J. E. LOGAN, Kansas City, declared that there is no doubt in his mind that physicians have failed signally to consider seriously the adenoid in the adult, that may of itself appear absolutely innocuous. It may be so small in size that it may readily pass unnoticed. For that reason operative procedures that will reach those conditions that are so manifest in the vault of the pharynx, and so manifest in all the infectious diseases of the nasopharynx and of the tonsillar cavity are neglected. His experience shows that most cases of otosclerosis that have been so particularly obnoxious to the practitioner, to the laryngologist or to the otologist have originated

in this neglected condition. He believes that in many of these cases that have resisted all medical treatment previously, and in which there is the slightest evidence of any vegetations on casual examination, those little creases and sulci and pharyngeal recesses that are so prevalent in all of these adults can be found in the vault. This little remaining fibrous condition is of the greatest importance in the relief of all conditions in the middle ear, chronic catarrhal conditions, and the many infectious diseases found in the nasopharynx. The crises, as suggested by Dr. Mayer, are likely to recur, and this tissue is a ground for the culture of all infectious material. Dr. Logan has been able to make numerous investigations along the line of the vault of the pharynx in these apparently indifferent cases of all classes of bacteriologic and pathologic manifestations, and has found the Klebs-Loeffler bacillus, streptococci and staphylococci.

DR. ALICE G. BRYANT, Boston, in reply to Dr. Shurly said that these ten cases were not investigated for Pfeiffer's bacillus.

LARYNGEAL MANIFESTATIONS IN LOCOMOTOR ATAXIA AND MULTIPLE SCLEROSIS.*

WOLFF FREUDENTHAL, M.D.
NEW YORK CITY.

The astonishing findings of Dr. W. B. G. Harland in cases of locomotor ataxia caused me, after reading last year's preliminary report of the Section on Laryngology and Otology, to examine all such cases at my disposal at the Montefiore Home, with the view of presenting the results in the subsequent discussion of Dr. Harland's paper. Unfortunately I was prevented from attending that meeting, but the investigations were not abandoned; on the contrary, they were repeated. Afterward, all the cases of multiple sclerosis were also examined, with the view of clearing up some pending questions, especially in regard to paralysis of the abductors, the modifications of the voice, the ataxic movements of the cords, etc. Finally, a visit was made to the City Hospital on Blackwell's Island, and fourteen cases of tabes were examined. But I do not consider these last findings of absolute statistical or scientific value, for the reason that the patients were examined only once, which can not be considered a sufficient basis on which to pass final judgment in locomotor ataxia.

The statements of Dr. Harland that "the larynx is very seldom seriously affected in locomotor ataxia," and that he was unable to find a tabetic case with laryngeal crises, were so much at variance with my own experience and all that I had read on the subject, that I naturally devoted especial attention to these points.

In order to make it easier to understand these cases, their histories should have been given in full, but they had to be abridged or this paper would have been too lengthy. The histories of the cases examined only once at the City Hospital were purposely omitted. The same has been done, to a large extent, with the cases of multiple sclerosis, as in this connection they are of secondary importance, although highly interesting in themselves.

CASE 1.—*History.*—Samuel W., aged 50, admitted June 6, 1907. Chancre at age of 20; used tobacco in excess. Present illness began twenty-five years ago, with shooting pains in both legs. One year later right arm suddenly became paralyzed. For past fifteen years has had trouble with his bladder and rectum; three and a half years ago fell and fractured left patella. June 18, 1907, fractured left tibia from a very trifling cause.

Examination.—Jan. 30, 1908. When patient speaks has to stop often on account of tickling in his throat. Has a marked postnasal catarrh with a good deal of secretion. Right vocal cord fixed in the median line. Left vocal cord moves about 2 mm. on inspiration. Secretion on the right vocal cord. False vocal cord thickened. No dyspnea. February 13: Right vocal cord fixed in median line, border straight; left vocal cord moves very little; voice gives out easily.

Diagnosis.—Paralysis of both postici, with secondary contraction of adductors of right side.

CASE 2.—*History.*—Harry S., aged 43, admitted March 23, 1903. Present illness began five years ago, with dizziness and shooting pains. Three years ago a general eruption appeared; was given a thorough course of inunctions, lasting four months. Girdle pains then developed; patient had to be catheterized and began to have difficulty in walking. Vision failed and paresthesias in the feet appeared. Developed a perinephritic abscess, which had to be opened at Montefiore Home. Has frequent gastric crises. No laryngeal crisis.

Examination.—April 15, 1907: Larynx normal. Jan. 27, 1908: Can speak in a loud voice; right vocal cord almost immovable in median line; left vocal cord moves to "cadaveric" position on deep inspiration.

Diagnosis.—Complete paralysis of posticus on right side; partial paralysis of left. The progressive character of tabes was noticed in this case. In April, 1907, the larynx appeared normal, while a year later there were marked lesions of the motor apparatus.

CASE 3.—*History.*—Mrs. R. G., aged 49, admitted April 1, 1903. Married and had four children, of which the first born was marasmic; then a number of abortions; only one child is living. Had cataract at age of 26, since which time she has had trouble with her vision, until finally she became blind. About ten years ago had shooting pains in the lower extremities; two years later paresthesias in the soles of the feet. About this time locomotion became impaired. April 5, 1899: Was attacked by dyspnea, cough and severe hiccough which lasted about ten minutes. She then became cyanotic and artificial respiration was resorted to. Oct. 11, 1904: Again had laryngeal crisis; cyanotic for about ten minutes.

April 29, 1907: For three days patient has had severe shooting pains in her left loin. Yesterday uncontrollable vomiting and retching. Just at noon to-day patient suddenly became cyanotic after coughing for a time, breathing very stertorously and in gasps; she soon became unconscious, frothing at the mouth, and then livid and almost cadaveric. Except for an occasional gasp, breathing ceased. Venesection was performed and eight ounces of blood abstracted; meanwhile artificial respiration was kept up. In about ten minutes she regained consciousness; following this she had hiccoughs for four hours. Larynx normal.

Diagnosis.—We have here an exceptionally severe example of laryngeal crisis, which reminded the writer of a case reported by Cherchevsky. The attack observed by him was very similar to the one described above and lasted forty-eight hours (!). The patient recovered, but died suddenly of a similar seizure several years later.

CASE 4.—*History.*—Mrs. R., aged 61, admitted Aug. 30, 1904. Husband died of dementia paralytica. Twenty years ago had attacks of severe vomiting of obscure origin, at times accompanied with diarrhea and fainting; sixteen years ago shooting pains and paresthesias. Soon after, patient experienced difficulty in walking. Had diplopia ten years ago. Had frequent gastric and, at times, rectal crises; no laryngeal crises; deglutition normal.

June 21, 1907: Partial paralysis of right vocal cord.

Examination.—Jan. 24, 1908: On phonation, vocal cords do not close in median line, a straight narrow slit of about 2 mm. being left between them. On inspiration vocal cords do not open to their full extent.

* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

February 13: Incoordinate movements on phonation and inspiration. Vocal cords open only to cadaveric position.

Diagnosis.—Partial paralysis of both postici.

CASE 5.—*History.*—Herman D., aged 27, admitted Jan. 2, 1907. Had typhoid at 23; chancre two years ago; also several attacks of gonorrhea; alcoholic and dissipated. Present illness began four years ago, with headaches; in October, 1905, lightning pains and weakness in the legs; then girdle pains and occasional bladder disturbances; at times diplopia; no gastrointestinal or laryngeal crises.

Examination.—April 15, 1907: Chronic laryngitis; both vocal cords move normally. May 27: Vocal cords functionate well, but there is paresis of the transversus. June 4: Slight paresis of the transversus.

Jan. 24, 1908: Left vocal cord normal; right vocal cord on phonation leaves an elliptical interspace. February 13: Larynx normal; elliptical interspace hardly visible.

CASE 6.—*History.*—Mrs. G. O., aged 48, admitted Aug. 30, 1905. Parents related; insanity in the family. Since childhood has had epileptic attacks. Numerous abortions. Husband died of dropsy from alcoholism. Present illness began fifteen years ago with weakness in the legs and a perforating ulcer on right sole; epileptic attacks then appeared more frequently and walking became difficult; later gastric crises occurred, and two years ago Charcot's knee. Pharyngeal reflex stronger on right side.

Examination.—April 15, 1907: Has queer attacks of fainting, with retching and hiccough; left pharyngeal arch lower than right; left side of fauces and tonsil anesthetic; larynx could not be examined.

June 4: Left vocal cord paralyzed (?).

Jan. 2, 1908: Could not be examined; therefore, no positive diagnosis could be made.

CASE 7.—*History.*—A. K., aged 30, admitted May, 1907. Married at 20; wife had one miscarriage and four children; denies venereal disease. Present illness began in 1905 with severe pains in the legs, shooting in character; soon legs became weak and patient had to walk with a cane; at this time had incontinence of urine; had ataxic walk and loss of tactile sense in feet.

Examination.—Jan. 30, 1908: Vocal cords injected, thickened, and of a brownish red color; close perfectly, but open only half way, i. e., about to cadaveric position on deep inspiration.

February 13: Vocal cords open only about 3 mm., but close in median line. Posteriorly there is a triangular opening on phonation.

Diagnosis.—Paresis of postici and of transversus.

CASE 8.—*History.*—Mamie B., aged 38, admitted June 5, 1903. Family and previous history negative. Present illness began two years ago with pains and twitchings in legs; then trouble with walking; received mixed treatment, after which gait improved, but afterward grew worse again. Sensation disturbed from below waist line; hyperesthesias and hypalgesia.

Examination.—May 27, 1907: Larynx normal. Feb. 13, 1908: On inspiration, jerky movements of cords; otherwise normal.

CASE 9.—R. H., aged 36, admitted July, 1907. Past history: denies chancre; addicted to alcohol and masturbator. Present illness began about eight years ago with severe sciatic pains; had three gastric crises in first year; then stiffness of legs and incoordination of movement; paresthesias in feet. Often had no control over his bowels; occasionally severe diarrhea.

Examination.—Jan. 24, 1908: Larynx diffusely congested, otherwise apparently normal. February 13: Hyperesthesia of larynx; left vocal cord does not open to its full extent, but only halfway; epiglottis flaps down somewhat. Patient, though not musical, is able to modulate his voice in singing.

Diagnosis.—Paresis of left posticus and laryngeus superior.

CASE 10.—*History.*—M. G. admitted Sept. 25, 1907. Father died of apoplexy. As a child had measles, scarlet fever, and smallpox. Had gonorrhea, but denies a chancre; however, gives good history of secondary syphilis; married, but no children; wife aborted. Present illness began seventeen years ago, with pain and weakness in lower extremities; then his sight began to fail until six years ago, when he became totally blind. Had various paresthesias, especially girdle pains. Larynx normal.

CASE 11.—*History.*—J. Z., aged 49, admitted Nov. 19, 1895. Father died of tabes. Had facial neuralgia as a boy; at 19 a cataract in left eye; at 31 two sores on the penis, coming thirty days after intercourse; had a sore throat; was treated for six months; excessive smoker and dissipated. In 1887 noticed failure of vision; in 1880 optic atrophy; 1890 girdle pains and weakness of legs; six or seven years ago incontinence of urine.

April 15, 1907: Could not be examined. Singing voice unimpaired.

May 27: Gives a history of having strange attacks of coughing-spells, which he calls "locomotor cough." These come on especially at night and are followed by sneezing.

Examination.—June 4: Partial paralysis of both vocal cords; sometimes they do not open at all during inspiration; no stridor or dyspnea.

Jan. 24, 1908: Larynx diffusely injected; epiglottis flaps down; vocal cords can not be seen; voice clear; occasionally laryngeal crises.

February 13: Vocal cords open only a few mm.; no stridor nor dyspnea.

March 2: Vocal cords participate but little in phonation and respiration; they close on phonation; when patient is told to take a deep breath the cords first approximate and then open, but not more than about 1 or 1½ mm. There is a slight elliptical space between the cords, and posteriorly a small slit; patient speaks in quite a clear voice; no dyspnea (patient not being able to walk, sits in a rocking chair).

Diagnosis.—Complete paralysis of both postici with median position of cords.

CASE 12.—*History.*—F. H., aged 54, cigar packer, admitted February, 1908. Had scarlet fever and measles; chancre at 23; from age of 29 had attacks of migraine. Admits venereal and alcoholic excesses. Wife had several abortions. Present illness began four years ago with stinging sensations in the thighs and back, followed by weakness. Kept up with his work until two years ago, when shooting pains in small areas in the lower extremities appeared; weakness increased, with uncertainty in walking. A year ago could no longer walk without assistance; at the same time, paresthesias appeared, e. g., numbness, etc. Ataxia was marked; upper extremities became weak and felt heavy; has to strain to pass urine; girdle feeling developed a year ago; never had crises of any kind.

Examination.—Special Note: The left angulus scapula is prominent, e. g., there is a winged scapula; distinct signs of serratus magnus paralysis; digitations of left serratus more pronounced than those of right.

Feb. 13, 1908: Larynx normal.

CASE 13.—*History.*—Mrs. M., aged 48, admitted June 18, 1906. Had usual diseases of childhood; first husband died of paresis; had one miscarriage. Present illness began with lightning pains and a girdle sensation; one year ago ataxia; diplopia five months ago. Lower limbs under poor control; occasional difficulty in speech; inability to use left hand; pain in left arm.

Examination.—Excursion of right vocal cord better than that of left, but that varies at times. There is usually a small triangular space open posteriorly at the cartilaginous part.

March 2, 1908: Larynx normal.

CASE 14.—M. N., aged 45. Gives a history of chancre. Larynx normal.

CASE 15.—A. L., aged 55, admitted September, 1907. Gonorrhea three times; chancre at 36; wife had six miscarriages. Larynx normal.

CASE 16.—M. F., aged 52, admitted July, 1907. Has no knowledge of having had a chancre, but gives an indistinct description of secondary luetic manifestations; wife had two miscarriages.

Examination.—Jan. 28, 1908: Larynx apparently normal. February 13: Can not be examined.

CASE 17.—*History.*—Mrs. B. L., aged 42, admitted Feb. 13, 1907. Mother died of apoplexia. No children. Seventeen years ago was at Mt. Sinai Hospital six months for gastric ulcer; vomited greatly and was fed by rectum; six years later was operated on for appendicitis. In July, 1906, was suddenly taken ill with severe vomiting, diarrhea, and cutting pains all over the body. The vomiting continued for about a month, and nothing could control it; she became so weak that for a time she could not talk; when she got out of bed she could hardly walk because her legs were ataxic, as were also her hands. Lightning pains in the thighs and, for a short time, she had no control over her bowels. Has had a number of attacks of gastric crises. Shows ataxic movements of vocal cords, but they open and close perfectly.

CASE 18.—*History.*—C. A., aged 50, admitted May 23, 1905. Diphtheria; gonorrhea twice. In 1897 noticed strabismus, then cramps in legs; in 1898 diplopia and difficulty of holding urine; in 1899 staggering and girdle pains; later paresthesias in feet; in 1902 could see no longer, optic atrophy; had rectal crises in hospital. Upper extremities in good condition; coordination fairly well preserved; complete loss of coordination in lower extremities; tactile anesthesia from umbilicus down to toes.

Examination.—April 15, 1907: Larynx normal. May 27: Larynx normal.

Jan. 20, 1908: Voice clear; sensibility reduced; gives history of laryngeal crises, especially in beginning of disease. Left vocal cord does not move; remains in extreme abductor position; right cord moves freely and beyond the median line.

We note in this case a total paralysis of the left recurrent nerve, which developed under our eyes. When patient was examined on May 27, 1907, the vocal cords moved freely, while a year later the affection of the recurrent nerve was plainly visible. This is a point to be borne in mind by all those who examine their tabetic cases only once, and on this base a final opinion as to the rarity of those lesions.

CASE 19.—*History.*—J. C. admitted Feb. 16, 1905. Had measles; denies syphilis; habits moderate; shoemaker by occupation. Present illness began two years ago, with pains in the lower extremities, which gradually increased in severity; after a time, complete loss of tactile sensation in feet, and patient finally became ataxic. A month ago, nocturnal incontinence; has to strain during the daytime; sexual power is diminished; no crises; during phonation, tremor of fauces visible for a few seconds, after which they assume a normal state.

Examination.—April 15, 1907: Long uvula; partial paralysis of right vocal cord (?). May 27: Impossible to examine.

Jan. 27, 1908: Larynx normal.

CASE 20.—*History.*—Samuel C., aged 44. Had whooping-cough, measles, and at 15 typhoid. Chancre at 26; overindulged sexually. Present illness began eight years ago, with weakness in the legs and vertigo; then began to have difficulty in vision, optic neuritis; six years ago, bladder disturbances; has had attacks of laryngeal crises with obstinate attacks of hiccoughs lasting four days at a time, accompanied with some vomiting.

Examination.—April 15, 1907: Paralysis of left posticus; vocal cord fixed in median line, border uneven. Voice is peculiarly high-pitched and hoarse.

Jan. 24, 1908: Right vocal cord moves freely; left in cadaveric position. February 13: Left vocal cord immovable in almost extreme inspiratory position; right vocal cord moves beyond the median line toward the other cord, but does not meet it, leaving a chink open, so that vocal bands run parallel at about 1 mm. distance.

This is another example of a gradual development of the different stages of paralysis of the recurrent nerve.

LARYNGEAL FINDINGS OF CASES AT CITY HOSPITAL.

All presented a clear history of lues.

CASE 21.—H. K., aged 41. Father died of tabes. Vocal cords close in median line, but open on inspiration only about 2 mm.

CASE 22.—D. B., aged 45. Right recurrent paralysis; left vocal cord moves over to other side.

CASE 23.—K. B. Sensibility of larynx reduced; right vocal cord normal; left, on inspiration, moves only to cadaveric position.

CASE 24.—J. D., aged 58. Larynx normal.

CASE 25.—A. C. Laryngeal and gastric crises. Epiglottis drops over introitus laryngis, obscuring view.

CASE 26.—J. V., aged 66. Normal.

CASE 27.—J. B., aged 68, coachman. Normal.

CASE 28.—F. S., aged 66. Superior laryngeal nerve affected; right side of epiglottis drops over, shutting off view. Very interesting picture, though interior of larynx can not be seen.

CASE 29.—J. McN. Laryngeal and gastric crises. Impossible to see larynx.

CASE 30.—C. McD., aged 51. Larynx normal.

CASE 31.—H., aged 59. Blind. Larynx normal.

CASE 32.—J. C., aged 59. Bladder difficulty. Larynx normal.

CASE 33.—D. S., aged 59. Shortness of breath; incontinence of urine. Larynx normal.

CASE 34.—Henry T., aged 51. Larynx normal.

On going over these cases carefully there is noticed the great difference in the laryngeal conditions. At the City Hospital we have had, out of a total number of fourteen, not less than eleven cases in which no gross lesions of the nerves could be found. In these eleven cases are included three in which the interior of the larynx could not be seen on account of the epiglottis obscuring the view, or the patient being unmanageable. The other eight cases were marked normal, so that only three are left with pronounced lesions in the larynx. I am quite sure, however, that a larger number would have been found to be affected had we examined them several times at intervals, as we did those at the Montefiore Home.

In corroboration of his statement regarding the rarity of such affections, Harland quotes a number of writers, but his citations are characterized by the omission of those authorities who have done most work in the field, as, for example, Felix Semon, Krause, Burger, and others. Dreyfuss is the only author of any consequence, within my recollection, who found that the number of laryngeal disorders due to locomotor ataxia was very small. He observed among his twenty-two tabetics only two with laryngeal affections. But even Dreyfuss does not lay too much stress on his statistics, and they have to be accepted as exceptions to the rule.

On the other hand, Krause observed among 38 cases, gross lesions of the larynx 13 times. Burger noted laryngeal anomalies in 6 of 20 cases. The only form of paralysis he observed (4 times) was that of the crico-arytenoidei postici muscles, in other words, only the abductors were affected. In 14 cases Burger noted a high pulse rate, showing paralysis in the area of distribution of the vagus and the spinal accessory nerves.

In my 20 cases observed carefully, during a long period, at the Montefiore Home, there were only 6 with a normal larynx; 6 cases showed paralysis of the posterior crico-arytenoids, viz., total paralysis in 4 cases and partial paralysis in 2 cases. Besides these, there were 2 cases of complete paralysis of the recurrent nerve; 4 cases were either doubtful, on account of the impossibility of examining them, or were not classified.

We see, therefore, that the proportion of laryngeal affections is larger than that noted by other observers.

Are our cases especially malignant? I presume not, but rather believe that the considerable number is due entirely to the length of the period of observation. If other cases had been examined just as frequently, perhaps the same result would have been obtained.

LARYNGEAL CRISES.

The attacks termed laryngeal crises have been so frequently noticed by me in a mild or severe form that it would seem that they are almost of pathognomonic value in the early stage of the disease. Why these attacks occur, particularly at this period, was long a mystery to me, until an article by Dr. Michael Grossmann[1] of Vienna came to my mind. The reasons given by Grossmann for the sudden attacks of dyspnea in the beginning of the growth of an aneurism seem so applicable to our tabetic laryngeal crises, that, logically, we should adopt them for the latter as well.

Grossmann says that while we all understand the laryngeal conditions after the aneurism has once developed, the conditions during the period of formation have not been studied at all. He claims[2] that an aneurism, especially one of the large thoracic vessels, does not suddenly attain its full size, so as to cause complete compression and loss of function of the nerve at once. Before this final stage sets in there must be periods when the nerve is only mechanically irritated. Now, as long as the pressure is slight, simply a motor disturbance will follow, with resulting spasms of the glottis, and not a paralysis of the vocal cord. If the pressure remains slight the nerve may accommodate itself to it until an increase in pressure again produces motor disorders, accompanied by another spasmodic attack. Finally, the nerve becomes totally paralyzed, remaining permanently in the cadaveric position.

Grossmann bases his deductions on the following case observed by him:

A railroad conductor complained of a sudden attack of suffocation, and was found to have a paralysis of the left vocal cord. The next day the paralysis was gone, the vocal cords moving in a normal way. Later the patient returned, with reappearance of the paralysis, and Grossman made the diagnosis of a developing aneurism of the aorta, which afterward proved to be correct.

A few years after the publication of this report I was called in consultation to a very similar case, when the experience of Grossmann was still so fresh in my mind that I immediately made the diagnosis of beginning aortic aneurism, which later also proved to be correct. This happened about ten years ago.

When conducting the above investigations and seeking for the cause of the laryngeal crises, the analogy of the two conditions became evident. They differ only that in the one the irritation is mechanical and peripheral, while in the other it is central, and produced by the progressive process of tabes. On recently reading over Grossmann's original paper I found that he had referred to this analogy, but I had not been aware of it.

That in centrally produced irritations the nerves of both sides are affected is evident, and it is natural that such attacks will be more common in tabes than in developing aneurism. There is only one point that is not perfectly clear, viz., how is it that not all cases with laryngeal crises in the beginning show paralysis of the vocal cords afterward? Some do, but there are undoubtedly others that do not. The only explanation I can offer is that a local degenerative process was set up in the beginning of the disease, but failed to progress, so that the nerve had a chance to recuperate and apparently resume its function. But even in the later stages of locomotor ataxia laryngeal crises are not uncommon, if you will only carefully investigate the cases. They are overlooked frequently, just as are other laryngeal symptoms.

1. Ueber die laryngealen Erscheinungen bei einem in der Brusthöhle sich entwickelnden Aneurysma, Archiv. für Laryngologie und Rhinologie, Berlin, II, 254.
2. Loc. cit., p. 258.

SEMON'S LAW.

If it were necessary to produce any new arguments in favor of Semon's law we have an abundance in our material. That law, as you well know, states that in all progressive organic lesions of the centers or the trunks of the motor laryngeal nerves, the abductors of the vocal cords succumb more frequently than the adductors. We have found that to be true in many of our cases, since under our observation they developed the progressive character of a paralysis of the abductors. Let me remind you of cases 1, 11, 18, etc. In one case there was distinctly, at first, a paralysis of the posticus, and afterward the vocal cord of the same side that was flabby before straightened out, i. e., a secondary contraction of the adductor had appeared.

But apart from that there are questions that can not be answered satisfactorily. One of these is: How can it be explained that while in tabetics atrophy of the muscles in other parts of the body is so rare, it is comparatively frequent in the larynx?

Very surprising is Oppenheim's case of tabes and paranoia. In this case there was found, postmortem only, a degeneration of the posterior crico-arytenoids. Otherwise, nothing abnormal could be discovered. Whether we will or not, therefore, we must admit that the paralysis of the abductors is the primary factor, and the contraction of the adductors a secondary matter. This law is also confirmed by the general experience in tabes. As far as I am aware, no primary contraction of any other muscles than those of the larynx has been seen in tabetics: Why should it occur just here? On the other hand, such contractions are observed in another affection, viz., multiple sclerosis, which, of course, has no relation to tabes.

In order to determine the laryngeal conditions in multiple sclerosis I studied the cases at the Montefiore Home, and report them briefly here. It may be mentioned that in all the cases of multiple sclerosis, as well as in those of locomotor ataxia, the diagnosis was unquestioned by all the visiting neurologists of this institution.

CASES OF MULTIPLE SCLEROSIS.

CASE 35.—Lena K., aged 30. Jan. 14, 1908: Voice normal; on phonation, vocal cords close normally, on respiration move incoordinately; complains of difficult respiration, without apparent cause. February 3: Again complains of shortness of breath, but objectively respiration is easy. Motility normal.

CASE 36.—*History.*—L. K., aged 36. Voice semi-monotonous, drawling, easily changing into falsetto; laryngeal sensibility reduced.

***Examination.*—Laryngoscopically we see a picture very similar to that so graphically described by Réthi in one of his cases. On phonation, the vocal bands at first do not reach the median line, but stop short by about 2 mm. Then they separate and now approximate in the normal way. The same action is noticed when the patient is told to take a deep breath. The vocal bands do not assume the extreme inspiratory positions at once, but stop half way, execute an inward movement, then an outward one, until they finally reach the intended position.**

CASE 37.—*History.*—M. F., aged 34. Voice very characteristic; articulation poor; the words, as in the case of v. Leube's patient, are expelled rather than spoken. Almost each syllable is divided from the next one by a short interval. The voice is monotonous, and it seems as if a modulation

were impossible. After talking for a while, a crowing inspiration follows, which is quite loud.

Examination.—Jan. 14, 1908: Closure of glottis good, but outward movement of vocal cords limited to about half their natural expansion. February 16: Vocal cords open and close normally. On January 14 status was determined very carefully and a paresis of the postici noticed. We were surprised when, a few weeks later, the motility of the cords was found to be normal. Such apparent improvement has been noticed by other observers also.

CASE 38.—B. R., aged 25, admitted September, 1903. Jan. 14, 1908: Voice monotonous; has to catch breath very often when counting; sensibility normal; right vocal cord does not open to full extent. February 2: Very jerky movement of the left vocal cord on inspiration and phonation; both cords move freely on phonation and inspiration.

CASE 39.—*History.*—M. S., aged 29, admitted October, 1906. Jan. 14, 1908: Voice normal, somewhat husky; sensation of soft palate and uvula reduced, also that of hard palate. Voice normal; left vocal cord can not be clearly seen, as epiglottis is somewhat pulled down; right vocal cord moves somewhat beyond the median line on phonation.

Diagnosis.—Paralysis of left recurrent nerve and partial paralysis of superior laryngeal nerve. February 3: *Status idem.*

CASE 40.—H. P., aged 30. Jan. 16 and Feb. 11, 1908: Voice somewhat drawling; complains of shortness of breath, but can hold a tone a long time; vocal cords close in median line and open normally. No reason found for the subjective sensation of dyspnea.

CASE 41.—Nellie S., aged 23. Jan. 14, 1908: Complete anesthesia of velum and soft palate, extending to hard palate and tongue, and posterior wall of pharynx. Voice normal; cords show oscillatory movements, but close and open perfectly.

CASE 42.—Mrs. C. R., aged 61. Jan. 24, 1908: On phonation a small slit is left perfectly straight of about 2 mm. On inspiration vocal cords separate hardly at all, but appear to first close before opening.

Diagnosis.—Paralysis of both crico-arytenoidei postici.

CASE 43.—W. F., aged 36. Laryngeal examination impossible.

CASE 44.—Mary F., aged 39. Feb. 11, 1908: Right vocal cord does not reach median line, but there is a compensatory movement of the left cord, so that they meet. Voice clear.

Diagnosis.—Paresis of right recurrent.

CASE 45.—Mrs. Rosie M., aged 50. Normal.

It was my belief that by careful examination of these eleven cases more light would be thrown on the above much discussed question. In multiple sclerosis we observe primary contractions of muscles in different parts of the body and we are, therefore, justified in asking why this should not occur in the laryngeal muscles as well?

But here, again, the clinical observations teach us differently. Thus, for example, in case 44, we have a paresis of one vocal cord, and there is no doubt that in the future it will become fixed in the median line, thus showing a total paralysis of the abductors—in other words, a gradual progress of the paralysis. In case 39 there is a paralysis of the recurrent nerve, and most likely one of the superior laryngeal nerves. The latter is of great importance, since it demonstrates so clearly the paralysis of these nerves and their muscles.

A much better illustration of paralysis of the superior laryngeal is found in case 28 (a tabetic)—a case which should be seen to be appreciated. A pronounced paralysis of the nerve was observed on the right side, that portion of the epiglottis dropping over to the other side and obscuring the view to the interior of the larynx.

So we may say that in all the cases of multiple sclerosis, as well as in those of tabes, the tendency of the abductor fibers of the recurrent nerve to become affected sooner than the adductor fibers, as stated by Semon, is very apparent and needs no further explanation.

Before examining systematically all the tabetics at the Montefiore Home we had no idea that we would find many with laryngeal involvement. But how great was our surprise when one case after another exhibited such lesions. Patients in whom we had never suspected any marked lesions showed bilateral paralysis of the crico-arytenoidei postici muscles. There was no dyspnea, as the patients were constantly seated in chairs, no alteration of the voice, nor anything else to indicate any such grave affection. In fact, some of them laughed at the idea of having their throats examined. "My throat is all right," exclaimed one man; "if only my legs were as good!" and that was the patient with the bilateral paralysis of the abductors.

However, I do not want to establish this as the rule. These patients have no dyspnea because they sit quietly in their chairs all day long. Dyspnea would set in very quickly if they should attempt to walk. I recollect very distinctly two patients who came to my clinic, both had bilateral paralysis of the postici muscles, of tabetic origin, and both suffered greatly from shortness of breath. (One, by the way, gave a history of severe laryngeal crises.) Tracheotomy was proposed, but was rejected, and both patients died suddenly on the street.

To the cases of abductor paralysis I may be allowed to add here one of the very rare peripheral lesions of this kind.

CASE 46.—A woman whose husband suffered from tuberculosis came to my clinic complaining of a sensation as if she were choking. She weighed over 200 pounds, and the suspicion of any tuberculous process was a remote one.

Examination of the lungs revealed nothing positive, but the larynx showed a typical bilateral paralysis of the postici; the woman was suffering greatly from dyspnea. A few months later the diagnosis of pulmonary tuberculosis was made with certainty, both apices being affected.

POSITION OF THE VOCAL CORDS IN TOTAL PARALYSIS OF THE RECURRENT NERVE.

According to many observers the position assumed immediately after section of the recurrent nerve is the so-called cadaveric one. Semon, Horsley, Schech, and others have directly observed this, and their view is shared by most laryngologists who have worked in this field, with perhaps the only exception of Grossmann of Vienna. The latter, after experiments on the cat, believes it to be in the median line. Several observations made by me, in locomotor ataxia, seemed to indicate that—at least in some instances—the position is not in the median line nor in the cadaveric one, but outward and beyond this. In case 18 it is remarked that the vocal band is in extreme inspiratory position. In case 30 it is somewhat similar, and here it was furthermore observed that on phonation the healthy vocal band on passing over to the other side beyond the middle line, became parallel with the paralyzed cord, leaving a space of, perhaps, 1 or 2 mm. between them. That indicates that the retraction of the paralyzed vocal cord has advanced so far that the excursion of the healthy one is not extensive enough to close the rima glottidis, and it was remarkable that in the last mentioned case the affected vocal cord had retracted so far that it could hardly be seen.

VOICE.

In this connection it may be of interest to say a few words on the voice.

In multiple sclerosis the voice shows so many points of interest that this in itself could constitute the subject of a paper. I would mention here only the tremor, the drawling, and the monotonous speech; the change into falsetto, the impossibility of holding a tone for any length of time—which latter may be explained by the subjective, but not objectively perceptible, dyspnea of the patient, and many other points. I will take up briefly only one type, viz., the voice in tabetics.

It is not unusual for the voice to be unaffected in paralysis of one side of the larynx. A good example of this is found in the first case of Krishaber. An army officer with a paralysis of the left posticus had laryngeal crises; the voice was good. During one of these crises he was observed by Charcot. Three years later he was so much improved that he could re-enter service and give commands in a loud voice. After that, however, attacks of suffocation set in again.

But even in bilateral affections, a gross alteration of the voice is often absent. A remarkable example of this kind is found in Case 2. There was nothing to indicate those laryngeal symptoms so characteristic of bilateral paralysis of the postici muscles. The man had a strong, although not clear, voice, and no sign whatsoever of dyspnea. In spite of a few cases reported in the literature, I do not believe that to be the usual condition; on the contrary, the exception. Most of the other cases seen by me showed a certain alteration of the voice—an inspiratory interval between two or three words, etc.

The instability of the motor disturbances in the larynx has been referred to by Krause. After examining all these and many other cases, I conclude that he is right and that Burger is mistaken when he denies it. While we have to eliminate the special awkwardness of most of these patients, and the fear of a laryngeal examination (so natural in blind tabetics), etc., there remain cases that puzzle us by the diversity of the findings. Thus, in Case 5. we saw a paresis of the internus and transversus come and go, and a somewhat similar occurrence was noticed in other cases as well.

Baginsky also observed a case, reported by Kroenig, in which the laryngeal picture changed from time to time. Dreyfuss' case, quoted by Burger himself, showed on one occasion that the glottis was opened only to the cadaveric position, and on the next to a much greater extent. Another case, reported by Burger, viz., one observed by Dr. Kooy, presented a paralysis of one vocal cord which came and went quickly. All these observations should be borne in mind. The majority of all tabetic cases, however, demonstrate that the paralysis of the vocal bands is a steady one and that a cure is to be excluded.

CONCLUSIONS.

1. The larynx is frequently the seat of serious affections in tabetics.

2. Laryngeal crises are met with so often that they are almost of pathognomonic significance.

3. Unilateral and bilateral paralysis of the postici muscles are the affections par excellence in tabetics, but a unilateral paralysis of the recurrent nerve, often with the vocal cord in a hyper-abducted position, as mentioned by Harland, is nothing uncommon.

4. The abductor fibers of the recurrent laryngeal nerve are affected primarily in tabes as well as in multiple sclerosis.

5. The voice in tabetics is often not changed, in spite of advanced lesions.

6. In order to reach a positive diagnosis all these cases have to be observed during a considerable period.

7. In multiple sclerosis there is frequently present a subjective dyspnea that can not be explained by the objective signs.

DISCUSSION.

DR. S. A. FRIEDBERG, Chicago, mentioned a case of laryngeal crisis in tabes which he and Dr. Freer reported three months ago and in which he had the opportunity of observing the larynx during the crisis. The cords met in the middle line. There was perhaps a millimeter chink between, and in inspiration there was some passage of air through the glottis, a stridulous inspiration. The attack lasted about 20 seconds; it passed away, and recurred. The duration of the entire attack was probably about a minute. It was produced by an attempt to cocainize the larynx, and as soon as the applicator was put into the larynx the attack was brought on.

DR. EMIL MAYER, New York, said that a very important point in the diagnosis of these cases of laryngeal crisis is presented in the histories of two cases that came under his observation. In the one instance the patient presented himself with an apparently normal larynx, and yet with the story of having "choking attacks," as he explained it, at night. On further examination it seemed these were attacks of spasm that prevented him from breathing and at times made him feel as if he was choking. From the history Dr. Mayer made the diagnosis of locomotor ataxia, and took the patient to the neurologist in the Mount Sinai dispensary, where he had preseinted himself. The moment Dr. Mayer took the patient before the neurologist and told him what he suspected, he said: "Why yes, that man has been a patient of mine for some time." So that the laryngologist was able to make the diagnosis from the history of laryngeal crises. The second patient was a man who had had locomotor ataxia for about two years. He was attending to his business, being moved from his home to his carriage and from his carriage to the office, and was a confirmed tabetic, so that he himself knew his diagnosis. He had several attacks of extreme dyspnea, and his attending physician, not a laryngologist, took him to Dr. Mayer stating his belief that the man had laryngeal crises. An examination of the larynx showed a myxomatous polyp between the cords, removal of which removed every laryngeal symptom.

DR. W. FREUDENTHAL, New York, said that he has never succeeded in examining the larynx during the laryngeal crisis, and should be glad to have further information on the subject. As soon as the larynx is cocainized in most of these cases the crises cease; in the cases reported this afternoon the patients had such severe attacks that it was absolutely impossible to examine. The cases of Dr. Mayer are of interest; of course one would naturally look for a tumor. Those choking attacks are interesting. One patient told Dr. Freudenthal that he had queer attacks that he called locomotor cough, a characteristic description; Dr. Freudenthal would also be inclined to use this term. Just before coming to the meeting he received in New York a paper by Dr. Griffin of Berlin. Dr. Griffin has made systematic examinations of a great many cases of tabes, and he comes to almost the same conclusions. He says that the majority of these cases show some pathologic lesion in the larynx. And that is Dr. Freudenthal's experience, too.

Sugar Production from Fruit of Parkia Biglobosa.—At the meeting of the Paris Academy of Sciences, January 27, Goris and Crété presented a study of "Netté flour," the pulp of the fruit of the *Parkia biglobosa*. It is much used by the natives of tropical Africa as a nourishing article of food. Analysis showed that it contains more than 25 per cent. sugar—a larger proportion than is found in the sugar beet or sugar cane. The name "Netté flour" is misleading, as the fruit contains no starch.

THE PHLORIDZIN TEST.

WITH SPECIAL REFERENCE TO THE INFLUENCE EXERTED BY A DISEASED KIDNEY ON THE EXCRETORY WORK OF THE SECOND ORGAN.*

EDWIN BEER, M.D.

Assistant Visiting Surgeon, Bellevue Hospital and Assistant Adjunct Mount Sinai Hospital.

NEW YORK CITY.

I shall limit myself to the report of seven selected cases,[1] which I believe demonstrate that a diseased kidney may so affect the excretory activity of the second kidney as to mislead all who rely too much on our present functional tests. I shall not deal with those disturbances of the second kidney that we see in acute obstructive conditions of the diseased side and which have been produced experimentally by Götzl. These lead to oliguria or to complete, though usually only temporary, anuria, and are best explained on a nervous basis as instances of reflex inhibition. I shall confine myself to the more chronic conditions in which excretory functional tests are possible. Moreover, I shall not discuss the degenerative changes in the second kidney, so-called sympathetic or toxic nephritis induced by disease of the impaired kidney. These changes evidenced by albumin and casts in the secretion of the second kidney are well recognized and known to all of us.

In the voluminous literature of functional kidney tests surprisingly little attention has been paid to the facts that I wish to present, and this is all the more surprising, as it is evident that if a diseased kidney can seriously affect the excretory work of the second organ all functional tests must be unreliable. This phenomenon really marks the crux of the whole question of functional tests, and with its demonstration, it seems to me, all attempts at a really accurate estimation of kidney capacity must fall to the ground.

In the following cases I have made special use of phloridzin, which in normal cases leads to a glycosuria. As the percentage estimation of glucose recommended by Casper and Richter is liable to be influenced by incidental polyuria or oliguria, and as the estimation of the total amount of glucose excreted by each kidney is impossible because urine frequently leaks by the catheters into the bladder, and these can not regularly be left in the ureters until the glycosuria ceases, I have employed the simpler modification of Kapsammer. This method takes cognizance of the time of appearance of sugar in the two separated urines. Normally glucose appears in the first thirty minutes after hypodermic injection of a warm solution. I used from 10 to 20 minims of an alcoholic solution in which phloridzin is readily held, warming it always before subcutaneous injection with an alcohol-washed syringe. The urine was tested at frequent intervals for glucose with Fehling's reagent. In 1904 Kapsammer announced his modification of the phloridzin test, and recently he has published a large work[2] on kidney diagnosis and surgery which energetically pushes his earlier views.

CASE 1.—K. G., 22 years, housewife.

Diagnosis.—Tuberculosis of kidney.

Nephrotomy of Left Kidney.—Oct. 23, 1906, for perinephritic and nephritic abscesses (pus sterile in smear and culture).

Cystoscopy and Bilateral Ureteral Catheterization.—Nov. 16, 1906, bladder and ureteral ostia normal.

Left Kidney (Tuberculosis).	*Right Kidney.*
Moderate, watery discharge.	Copious, amber colored.
Acid.	Acid.
Specific gravity, 1005.	Specific gravity, 1020.
No albumin. No sugar.	Trace of albumin. No sugar.
Urea, 3.5 per mille.	Urea, 13.0 per mille.
Chlorides, 1.0 per mille.	Chlorides, 3.0 per mille.
Microscopically.	
Moderate number of pus cells.	
Calcium oxalate crystals.	Calcium oxalate crystals.
No tubercle bacilli.	No tubercle bacilli.
No gonococci.	No gonococci.
Few red blood cells.	Few red blood cells.

Phloridzin Test.—Ten minims of a 1 per cent. solution in alcohol (33 per cent.). Left kidney absolutely negative in the fifty minutes following injection. Right kidney showed slight reduction of Fehling's solution at twenty minutes, but up to fifty minutes there was no sugar reaction.

Nov. 21, 1906: Nephrectomy. Left kidney showed a large caseous abscess in upper pole which did not communicate with the pelvis. Smaller tubercular foci were scattered through the kidney and the mucosa of the pelvis was thickened and inflamed.

January, 1907. Seven weeks after the nephrectomy another phloridzin test was made and the right kidney showed a copious sugar reaction at twenty minutes and this sugar excretion persisted for more than three hours (last examination). The patient's urine subsequent to the nephrectomy continued to show a faint trace of albumin and corresponded with the above analysis of the urine obtained from the right kidney minus red blood cells.

Here is a case in which the diseased organ so influenced the work of the second organ that the latter failed to excrete sugar (within fifty minutes) while the diseased organ was in the body. When the diseased kidney was removed the remaining organ responded promptly to the phloridzin test. If the first phloridzin test had been followed the patient would have remained an invalid, whereas now she is cured and well. Both the percentage estimates of Casper and Richter and the time of appearance of the sugar, according to Kapsammer, would have led us astray in determining subsequent therapy.

CASE 2.—I. S., 37 years, housewife.

Diagnosis.—Tuberculosis of kidney.

Cystoscopy and Bilateral Ureteral Catheterization.—Jan. 5, 1907. Bladder normal. Left ureteral ostium negative. Right ureteral ostium at first normal in appearance, but during the examination it became plugged with a mass of brown, soft tissue which projected into bladder and could not be displaced. The right ureter was obstructed at three inches from the bladder and on removing the catheter from this ureter without obtaining a specimen, the above plug followed it down and blocked the meatus of the ureter. To make sure that this ureter was blocked I made use of the indigo carmine test, whose value in such cases I can "not overestimate,"[3] and obtained absolutely no discharge from the right kidney, and copious discharge of blue urine from the left kidney at twelve minutes after the injection. The left kidney rapidly secreted yellow, slightly turbid urine, acid, specific gravity 1018, distinct trace of albumin, no sugar, urea 1.1 per cent., chlorids 1.2 per cent.

Microscopic Examination.—Flat epithelial cells, caudate cells, few epithelial casts, red blood cells, no tubercle bacilli.

Phloridzin Test.—Ten minims, was negative. Slightest reduction at twenty-seven minutes, but no sugar reaction.

Phloridzin Test (second).—Jan. 6, 1907. Twenty minims injected. At twenty-five minutes slight reduction. No sugar reaction up to thirty-five minutes after injection.

Cystoscopy and Ureteral Catheterization (second).—Jan. 12, 1907. Same condition as examination of seven days earlier. Right ureter is still plugged and no urine is excreted from this kidney.

*Read before the Genitourinary Section of the New York Academy of Medicine, April, 1908.

1. The majority of these cases were studied in the German Hospital in the surgical services of Drs. Kammerer, Kiliani and Meyer. Many of the careful urine analyses were made by Dr. O. Hensel of the Pathological Department, to whom I am much indebted.

2. Nierendiagnostik und Nierenchirurgie, Vienna, 1907.

3. Ann. Surg., October, 1906.

Phloridzin Test (third).—Fifteen minims injected. At twenty-seven minutes slightest reduction, but no sugar reaction. Left kidney secretes pale, clear, neutral urine, specific gravity 1007, phosphates 0.03 per cent., chlorids 0.15 per cent., urea 0.2 per cent., albumin, indican, acetone, sugar and diazo negative. Microscopically, few epithelial cells, few leucocytes.

Phloridzin Test (fourth). Jan. 13, 1907. Fifteen minims injected and again at twenty-five minutes slight reduction, but no sugar reaction within the first half hour.

Nephrectomy.—Jan. 14, 1907. Right kidney was enlarged and showed multiple abscesses connecting with the dilated pelvis which contained pus and albuminous masses (pseudostones), such as patient had passed and similar to the one that protruded into the bladder and blocked the ureteral meatus.

Phloridzin Test (fifth). Feb. 28, 1907. Fifteen minims injected and at twenty minutes a copious very marked sugar reaction was present.

In this case we have a patient who previous to the removal of the diseased kidney was living on her left kidney, as the right ureter was blocked. Apparently this organ was adequate, as she showed no signs of kidney insufficiency. Despite this adequacy on four successive phloridzin tests this kidney failed to excrete sugar within thirty or thirty-five minutes after the injection, but when the malevolent influence of the diseased organ was withdrawn by nephrectomy this left kidney promptly excretes sugar within twenty minutes. Though it was self-evident that this left kidney was adequate, as it alone was doing the excretory work of the patient, still the negative phloridzin tests bade us pause. Had we relied on these we would have made a serious mistake, as the patient recovered completely after the nephrectomy. The same criticism applies to any undue reliance on the low percentage of urea. Whereas high percentage speaks for concentrative power of the kidney, and perhaps high efficiency, low percentage as seen in this case, just like negative phloridzin results, appears very misleading.

CASE 3.—M. P., 56 years; housewife.

Diagnosis.—Pyonephrosis.

Cystoscopy and Bilateral Ureteral Catheterization.—Dec. 27, 1907. Bladder negative. Both ureteral ostia negative. There is no play at the left meatus, no efflux, and though three catheters were introduced (Nos. 4, 5 and 7, French scale), no specimen was obtainable. Right kidney secreted well; urine was acid, specific gravity 1020, very faint trace albumin, few pus cells, few erythrocytes.

Phloridzin Test.—Fifteen minims injected and there was no sugar excreted within fifty-two minutes.

Nephrectomy.—Dec. 30, 1907. Kidney enlarged, pelvis and ureter dilated and full of purulent fluid.

Diagnosis.—Pyonephrosis with obstructed ureter.

Phloridzin Test.—Jan. 27, 1907, after an uneventful recovery. At fifteen minutes there was reduction and at twenty-two minutes a copious sugar reaction. The postoperative urine analyses corresponded with the above analysis of the specimen obtained by ureteral catheterization.

Here again we see the influence of the diseased kidney on the second organ. Here again when the diseased kidney is removed the second organ responds to the phloridzin test as a normal kidney does. Here again the slight significance of a negative phloridzin result is emphasized. If the teachings of Casper and Richter, or of Kapsammer, had been adhered to, nephrectomy would not have been performed and our patient instead of being cured would be in her same suffering condition.

CASE 4.—F., 25 years; married.

Diagnosis.—Nephroptosis and tuberculosis of kidney.

Cystoscopy and Bilateral Ureteral Catheterization.—Feb. 19, 1908. Bladder was normal in appearance. Ureteral ostia were negative. The right osteum seemed drawn a little to the right. The right kidney specimen showed a very faint trace of albumin, some pus cells, some large epithelia. The left kidney specimen showed a trace of albumin, very few pus cells, many large epithelia.

Phloridzin Test.—Fifteen minims were absolutely negative on both sides at 20, 25, 30 and 35 minutes. Urine showed no tubercle bacilli.

Nephropexy.—This was performed Feb. 29, 1908, to relieve the repeated attacks of right renal pains, and during this operation a small diseased area was excised. This proved to be a tubercular lesion.

March 11. Bladder urine showed tubercle bacilli.

March 12. Bladder urine showed many tubercle bacilli.

Cystoscopy and Ureteral Catheterization.—March 14. The bladder picture was completely changed. The left ureter was normal, whereas the right ostium was edematous and pouting, surrounded by injected mucosa which was very tender. Just in front of the orifice was a distinct round little body resembling a tubercle. The mucosa of the right half of the trigone was injected and looked diffusely red, as if washed in blood. The left ureter was easily catheterized. I could not introduce a catheter into the swollen right ureteral ostium.

Uranalysis.—The specimen from the left kidney was acid, straw colored, clear, no sediment, specific gravity 1015, very faint trace of albumin, sugar (phloridzin) present, acetone negative, diacetic negative, indican negative, urea 0.8 per cent., chlorids 0.8 per cent.

Microscopically.—Few white corpuscles, few round epithelial cells, occasional red blood cells, no casts, no tubercle bacilli.

Phloridzin Test.—Fifteen minims showed a positive reaction between twenty and twenty-five minutes.

In this case I had a movable kidney, which at the same time was tubercular. Before the kidney was anchored the second organ failed to respond to the phloridzin test, but after the nephropexy, despite advancing tubercular disease, the second organ responded to the phloridzin test.

In the following cases the same peculiar functional disturbance of the second kidney is demonstrated with almost the same clearness, as in these cases the patients were living on only one kidney, and though that was adequate as far as allowing the patient to live, according to the phloridzin test the patients were living on an inadequate organ and should have been suffering from renal insufficiency.

CASE 5.—K., 36 years; housewife.

Diagnosis.—Ureteral calculus.

Cystoscopy and Bilateral Ureteral Catheterization.—May 20, 1907. Bladder shows some thickening of the mucosa. The right ureteral ostium is negative, whereas the left projects like a cervix and its lips are moderately everted. There is an obstruction in this side 1.5 cm. from the bladder which can not be pushed aside or passed with small or large catheters. No specimen could be obtained from left side due to occlusion, whereas from right side normal urine was obtained.

Phloridzin Test.—Negative during the first half hour.

The *x*-ray showed a calculus in lower end of left ureter.

Cystoscopy.—May 23, 1907. The left ureter was sounded with bougies. Injection of adrenalin and sterile liquid petrolatum into lower end of left ureter, which was still occluded. Stone could not be loosened.

Here again the failure to excrete sugar after the phloridzin injection can not be interpreted as due to any real and permanent disturbance, as the patient was living in absolute comfort and showed no signs of renal insufficiency. Evidently this is another of the instances of the malevolent influence of a disease of one side (ureter alone?) affecting the functional activity of the adequate organ, which is being subjected to the best test of its adequacy by the closure of the opposite ureter. If we could in this way imitate Nature and close one

ureter temporarily, we would approach much more closely to the solution of the problem of the adequacy of a doubtful kidney than we have done heretofore.

CASE 6.—A. S., 46 years; weaver.

Diagnosis.—Nephrolithiasis and carcinoma of the kidney.

Cystoscopy and Bilateral Ureteral Catheterization.—Oct. 27, 1907. Bladder was normal except for injection about right ureteral ostium. The right ureter was blocked close to the pelvis and left kidney secreted normally.

Uranalysis.—Specimen was acid, yellow, slightly turbid, specific gravity 1018, faint trace of albumin, no sugar, indican, bile, acetone or diacetic acid, urea 1.6 per cent., chlorids 0.5 per cent.

Microscopically.—Very few hyaline casts, few pus cells or epithelial cells, few crystals of calcium oxalate, no tumor cells, tubercle bacilli or gonococci.

Phloridzin Test.—Fifteen minims caused no result within first hour; then slight reduction.

The *x*-ray showed large calculus in the right kidney and pelvis.

Nephrotomy.—Oct. 28, 1907. An enlarged kidney with dilated pelvis contained large calculus was found. Following the operation the bladder urine remained unchanged, showing that the ureter was plugged or compressed (autopsy showed a carcinoma of the lower pole of the kidney occluding the ureter by pressure). The patient's condition rapidly became feebler and the repeated hemorrhages from the opened kidney led to his death.

Autopsy.—A carcinoma was found as mentioned above. The second kidney on microscopic examination showed practically no changes of moment. It was anemic and normal.

This case again illustrates the influence of a diseased organ on its fellow's activity. Here the second organ was microscopically normal; still this kidney failed to excrete sugar as a normal organ does, because of the peculiar influence exerted by its diseased mate. Here also the patient was living on his left kidney, as the ureter of the right side was closed. Nature's test of the adequacy of the left kidney was again at variance with the phloridzin test.

CASE 7.—M. C., 58 years; housewife.

Diagnosis.—Closed hydronephrosis.

Cystoscopy and Bilateral Ureteral Catheterization.—June 4, 1907. Bladder was negative except for cystocele. Left kidney secreted rapidly.

Uranalysis.—This specimen was yellow and clear, acid, specific gravity 1014, faint trace of albumin, urea 0.9 per cent., chlorids 0.48 per cent.

Microscopically.—Red blood cells, epithelial cells, few cylindroids, no casts, tubercle bacilli or gonococci.

Right ureter was occluded close to the pelvis about eight inches from the bladder, and the indigo carmine test showed no discharge from this kidney, whereas the left discharged blue urine. This test, plus the inability to pass three different catheters beyond the obstruction, made it evident that this kidney was not doing any of the patient's excretory work.

Phloridzin Test.—Fifteen minims proved negative during the thirty minutes following the injection.

Phloridzin Test (second).—June 6, 1907. Fifteen minims again negative.

Phloridzin Test (third).—June 7, 1907. Fifteen minims again negative in first forty minutes following injection.

Cystoscopy and Ureteral Catheterization (second).—Same condition as on June 4, 1907.

Nephrectomy for Closed Hydronephrosis.—June 10, 1907.

Patient died June 18, 1907.

On the last day she passed some 700 c.c. of urine. Urine after operation showed considerable albumin (1 pro M.) hyaline and coarsely granular casts, red blood cells and leucocytes. At autopsy the left kidney shows some areas of an old nephritis and well-marked epithelial degeneration and many casts in the tubules.

Here again was a patient living in comfort with a closed ureter on one side, the other organ doing all the necessary work. It was more than likely that this condition of affairs had existed some time prior to the first cystoscopy and up to the time of nephrectomy. Still the repeated phloridzin tests pointed to the conclusion that the only organ that was functionating was inadequate, which was not borne out by the observations before and after operation. If reliance had been placed on the percentage of urea it would have been almost as misleading as the phloridzin test.

A point of great interest in this case is the postoperative disease of the second kidney after the removal of the enormous adherent hydronephrotic sac. The absorption from this huge area was sufficient to produce a marked degeneration of the second kidney, as evidenced by the postoperative urine and microscopic examination of this organ, despite the fact that Nature's test of its function by forcing it to do all the legitimate work after closing the right ureter had pointed to its adequacy.

These cases seem to permit of but one conclusion, i. e., that a diseased kidney may so influence the second organ as to cause the latter to appear gravely diseased. This same conclusion was forced on me several years ago in considering the value of cryoscopy of the blood.[4] Disturbed function of an adequate organ may lead to molecular retention and concentration of the blood (low, freezing point), misleading us just as phloridzin did in the above series of cases. In looking over these cases they naturally fall into two series, four cases belonging to one, and three to the other. The first four are particularly important, as I was able to make a phloridzin test subsequent to the operation. Of such cases there are very few instances in the literature, and these are just the most enlightening of all clinical data bearing on the question of functional kidney tests. Even cases similar to the last three have not been reported in any number.

Turning to the literature of this subject we find that Rovsing has reported one experience similar to those detailed above. In a case of pyonephrosis he found after nephrectomy an early response to phloridzin, whereas before the operation there had been none, and also a rapid increase in the amount of urea excreted, which had been minimal prior to operation.[5]

In a similar case Kapsammer reports[6] similar behavior after using phloridzin, though his case is less striking than those mentioned above. Rovsing believes that the diseased kidney frequently disturbs the work of the second organ, and though his data are not published in a conclusive form, he states that this influence is observed in the following conditions, arranged in order of frequency: malignant tumors, tubercular pyonephrosis, nephrolithiasis, uratic nephritis and perinephritis. Kapsammer, ardent advocate as he is of the modified phloridzin test, admits that he has seen almost regularly a functional improvement in the second organ after the condition in the diseased organ has been attended to.

Albarran[7] calls attention to the influence exerted by hydronephrosis on the activity of the second organ, as well as the remarkable improvement which follows drainage of such hydronephrotic sacs. Koranyi pubpublished a case of pyonephrosis with blood freezing at 0.68° C. As soon as the pyonephrotic sac was removed the second kidney secreted better and the blood concen-

4. Present Status of Blood Cryoscopy in Determining the Functional Activity of the Kidneys. Am. Jour. Med. Sci., February, 1906.
5. Arch. f. Klin. Chir., lxxv, 1905.
6. Id., i, 317.
7. Exploration des fonctions renales, 319.

tration dropped to 0.57° C. Wiebrecht also reported a similar case of kidney tumor in which after nephrectomy the second kidney excreted more fluids and more solids than both organs before operation.

From all the above it seems that there is a factor underlying functional tests that has not been emphasized sufficiently in the past. Until the factor can be estimated all functional tests of the excretory activity of a kidney are misleading. All negative results might be occasioned by this factor, this peculiar influence exerted by a diseased organ on its fellow, whereas all positive results may in turn be shorn of some of their importance by the above influence (stimulation or inhibition). Whereas it is comparatively easy to approach the negative results and elucidate their import, positive results, though they may be occasioned in part by some such influence as we are discussing, are much more difficult to analyze, for self-evident reasons.

Just the nature of this influence, whether it be toxic or reflex, or both combined, I do not wish to discuss in this particular paper, whose object is to emphasize and demonstrate the fact that the second kidney may be so influenced in its excretory activity as to appear functionally deficient, owing to the presence of a diseased kidney, and that as soon as this influence has been removed this apparently inadequate second kidney responds to our functional tests as a normal organ.

116 West Fifty-eight Street.

AN EPIDEMIC OF CEREBROSPINAL MENINGITIS

AND THE SUCCESSFUL USE OF FLEXNER'S ANTISERUM.

AUSTIN MILLER, M.D. AND S. A. BARBER, M.D.
PORTERVILLE, CAL.

Porterville is a town of about 2,000 inhabitants, in the San Joaquin Valley, at the foot of the Sierras. Here in 1896 occurred five cases of cerebrospinal meningitis, of which two recovered. One, now a boy of 16 years old, is a hopeless cripple; he has no use of arms or legs.

The following cases have occurred in the present outbreak, which began early in December, 1907. The first twelve cases are given briefly; antiserum was not used; only one recovered; thus the mortality in these twelve cases was 91.6 per cent.

CASE 1.—(Dr. O. C. Higgins, December, 1907.) Miss T., aged 21, was examined at 11 a. m. by the doctor in a tent-wagon. Had had a chill and convulsions a few hours before. When seen by the doctor there was external strabismus and the patient was unconscious. Died about 9 a. m. the next day, within twenty-four hours of onset.

CASE 2.—(Dr. O. C. Higgins, Dec. 21 and 22, 1907.) E. W., aged 14, complained of pain in the neck and between shoulders. Chill at 4 a. m.; vomited eight hours later for two and one-half hours. Ten hours after the chill had convulsions and delirium, followed by unconsciousness, which lasted till death. Choking spells from onset of unconsciousness until death. Head drawn back and marked opisthotonos. Length of illness, twenty-nine hours.

CASE 3.—(Drs. Barber and Miller, Dec. 20, 1907.) L. H., aged 21; had a chill at bedtime; said he felt as though he had the grip. In the morning was found in bed unconscious and never regained consciousness. Kernig's sign and retraction of head were present and there was great restlessness and vomiting. Lumbar puncture was performed within twenty-four hours of onset; the cerebrospinal fluid was cloudy and contained many gram-negative diplococci, intracellular and extracellular. Patient died at the end of four days.

CASE 4.—(Drs. Higgins and Barber, Dec. 21, 1907.) Mrs. N., aged 40, was taken sick at noon. When seen at 1 p. m., she had a chill; complained of vomiting, headache. Kernig's sign and external strabismus were present. Could be roused. Died before midnight. Sick less than twelve hours.

CASE 5.—(Drs. Miller and Higgins, Dec. 31, 1907.) Mrs. O., aged 23, was taken sick at 4 p. m., with chill and severe headache and vomitings. She was unconscious by night. Kernig's sign was present, but no convulsions. Died at 11 p. m.; duration of illness, seven hours.

CASE 6.—(Dr. Barber, Jan. 1, 1908.) Mr. C., aged 23. Malaise all day, followed at 5 p. m. with chill. Found later in the evening unconscious in bed. Had been vomiting. Head was retracted and Kernig's sign marked. Violent delirium during which he got up and went out of doors. Died in twenty-seven hours.

CASE 7.—(Dr. Barber, Jan. 28, 1908.) C. E. B., aged 22; the night of January 27 had chill and vomiting. Went to Dr. Barber's office next day at 9 a. m., with pain in right iliac region. Temperature, 102 F.; tongue coated; symptoms of appendicitis. Signs of meningitis soon were apparent. Complained of pain in right thigh, but there was nothing objective there. Kernig's sign was present, also opisthotonos. Died in wild delirium. Sick three days.

CASE 8.—(Drs. Miller and Barber, Feb. 15, 1908.) Eva W., aged 7. Illness began with chill, vomiting and fever. There was retraction of the head and she complained of "drawing feeling" under knees. Headache in vertex; frequent urination, somnolence and unconsciousness. Lumbar puncture showed a cloudy cerebrospinal fluid which contained a great many Gram-negative diplococci, both intracellular and extracellular. Lumbar puncture was repeated each day; about 5 c.c. of fluid being withdrawn and a like quantity of antistreptococcus serum injected. This treatment seemed to be of some slight benefit, but the symptoms progressed in severity until death at the end of four days.

CASE 9.—(Drs. Barber and Miller, Feb. 23, 1908.) S. W., aged 4. The onset was typical, with chill, vomiting, retraction of head and somnolence. Kernig's sign and strabismus were present. Died at end of three days.

CASE 10.—(History told Dr. Higgins by child's mother.) Miss B., aged 13; onset with chill, vomiting, fever, unconsciousness. Death in twenty-four hours.

CASE 11.—(Dr. Barber, March 2, 1908.) S., aged 8. Onset with chill and vomiting; stupor. Marked Kernig's sign and retraction of head and strabismus. Was never unconscious; took nourishment throughout illness. His mother refused to have lumbar puncture done or to have the antiserum injected. Child recovered in one week.

CASE 12.—(Dr. Barber, March 15, 1908.) K., aged 6. The girl went to bed well; at midnight had a chill and vomited. When seen by doctor there was marked Kernig's sign, delirium, opisthotonos and petechial eruption. Died in eight hours.

The following four cases had the benefit of Flexner's antiserum; three were marked by recovery, giving a mortality of 25 per cent. The one patient who died would probably have been saved if our supply of serum had lasted.

CASE 13.—(Drs. Barber and Miller, March 12, 1908.) F. H., aged 14 months. At 8 a. m., March 11, he had a chill and vomited. Vomiting continued through the day and once in the night, at 1 a. m. Was seen by Dr. Barber at 5 p. m., March 11; temperature, 103 F.; pulse, 125. The child was very restless; Kernig's sign marked in both legs. By 7:30 p. m. there was external strabismus in both eyes and stupor. At the first visit the mother refused use of serum, saying, "I don't want any experiments tried on my baby."

March 12, 8 a. m.: Temperature, 102 F.; pulse, 140; respirations, 45. Child brighter and better. Kernig's sign not present in right leg, but slightly in left. Eyes straight. Nursed breast at 7 p. m. yesterday (first time since chill), and once last night. 9:30 a. m.: Temperature, 101 F.; pulse, 152; respirations, 48. Kernig's sign absent in right leg, slightly marked in left; eyes straight; expression fairly good. Blood examination showed leucocytes, 21,000. Parents consented to

use of serum. Lumbar puncture performed and about 15 c.c. of cloudy spinal fluid withdrawn and 15 c.c. of antiserum injected. Culture on hydrocele-agar showed no growth. The films showed a great many leucocytes, polymorphonuclears preponderating, but also many large mononuclears. There were no bacteria to be seen. Specimen stained for tubercle bacilli was also negative. 12:30 p. m.: Temperature, 102 F.; pulse, 120; respirations, 40. Had taken some of mother's milk; appearance better; wide awake.

March 13, 11 a. m.: Child rested quietly during previous night; no opisthotonos; eyes divergent. Kernig's sign slightly marked in left leg, but absent in the right leg. Temperature down to 100 F. Child recognized his mother. Blood count showed 14,380 leucocytes. Lumbar puncture performed and about 10 c.c. of fluid withdrawn. There seemed to be less intraspinal pressure and the fluid was no more cloudy than on previous day. The flow almost stopped after the withdrawal of 10 c.c.; 15 c.c. of antiserum injected. No growth was shown on either agar or hydrocele-agar cultures.

March 14: Child was better. Temperature at 11 a. m., 99.8 F. Eyes were straight. Lumbar puncture was repeatedly attempted but fluid did not flow, only a few drops being obtained. Antiserum could not be injected. This trouble was found later to be due to the needle being filled with coagulated serum. About 7.5 c.c. was given intramuscularly. Blood examination showed 7,722 leucocytes. The child had a good day and took some milk. Looked brighter.

March 15: Rested well during the previous twenty-four hours. Had taken milk every three hours during the night. Breathing was quieter and more regular. Slight divergence of left eye. Leucocytes, 6,932. Lumbar puncture was performed and about 5 c.c. of fluid withdrawn. Fluid, which was slightly blood-stained, flowed very slowly, as apparently there was not a high intraspinal pressure. Fifteen c.c. of antiserum injected into the spinal canal. Leucocytes, mostly polymorphonuclears, were numerous and there were some meningococci to be seen within the cells, staining rather indistinctly.

March 16: Baby still improving. Ordered 3 gr. hexamethylenamin daily.

March 21: Had been steadily improving up to March 20, but in previous twenty-four hours had not been so well. Kernig's sign was marked in both legs. Some erupting teeth seemed to trouble him very much. Leucocyte count showed 32,266. Lumbar puncture was performed and 15 c.c. of reddish-brown cloudy spinal fluid withdrawn and 15 c.c. of anti-serum injected. Smears showed a large polymorphonuclear cellular content. Meningococci were occasionally seen within the cells; they stained darkly. Culture on agar showed no growth.

March 22: The previous night was the best he had had yet. Slept from 9 p. m. to 8 a. m. Took 3 ounces of milk for breakfast. At 3 p. m. he was very restless. Lumbar puncture performed and about 24 c.c. brownish spinal fluid withdrawn that was clearer than before. There were a large number of mononuclear cells with large pale-staining transitional-form nuclei; polymorphonuclear cells predominated. Meningococci were not numerous. Thirty c.c. of antiserum injected. Culture on agar showed no growth.

March 23, 9 a. m.: Rested well all night. Took 1½ ounces of milk at 5 a. m. Looked exceptionally bright. Kernig's sign was slightly marked in both legs, but much less than on previous day. Eyes were straight. Temperature, 99 F.; pulse, 104; and respirations, 20. At 4:30 p. m., 30 c.c. of spinal fluid was withdrawn; it was almost clear and of a light lemon color. Thirty c.c. of antiserum injected. Many polymorphonuclear cells were seen, in which were a few faintly-staining micro-organisms. There were a number of large mononuclear cells. A culture showed no growth.

March 24: Rested badly on account of urticaria. Temperature, 101 F.; pulse, 100; and respirations, 24. Had taken 1 pint of milk since night previous. Kernig's sign was marked in both legs.

March 25: Temperature, pulse and respirations were all normal.

March 29: Child had been progressing better during the last few days. There were no signs of meningitis. He had a ravenous appetite and was evidently cured.

CASE 14.—(Dr. Miller, Feb. 15, 1908.) L. E. R., aged 8. Boy said to have been taken suddenly ill with pain in abdomen, cramps in muscles of arms and legs; vomited twice. Soon lost consciousness. Tossed and flung himself about the bed. He was seen six hours after onset and there were retraction of the head, divergent squint, Kernig's sign in both legs, and some petechial spots over arms, face, abdomen and legs. Blood examination showed 14,600 leucocytes. Lumbar puncture was performed and 35 c.c. of turbid spinal fluid was allowed to flow away and 30 c.c. of antiserum was injected. The fluid showed many polymorphonuclear leucocytes and some large mononuclears; meningococci were not numerous, but there were some within the cells and some without. Cultures both of agar and hydrocele agar showed no growth.

February 16: Boy much better; conscious. Took nourishment and drank water. Bowels moved twice and he urinated. There was some retraction of the head. On lumbar puncture only a few drops of spinal fluid flowed and this was lost. Puncture was repeated and 15 c.c. of antiserum was injected without withdrawing any spinal fluid.

March 17: Child had a good night and had a desire for food. Ordered 5 grains hexamethylenamin three times daily.

March 18: Child was still improving and neck was flexible. Legs showed a slight amount of rigidity. Kernig's sign. Evening temperature, 100.5 F. The boy demanded a liberal supply of food and wanted to get out of bed, saying he felt well.

March 20: Child up and dressed. Ate breakfast at family table. Recovery complete and remarkably prompt.

CASE 15.—(Drs. Barber and Miller, March 18, 1908.) Miss F. G., aged 19. Taken suddenly ill on morning of March 17 with a chill, vomiting and aching in legs and head. Temperature was 104 F., pulse 140. Mind was perfectly clear; eyes straight; no Kernig's sign. In the evening felt somewhat better; temperature 103 F.; still no Kernig's sign. During the night she became very much worse; was delirious and had to be restrained and kept in bed. Kernig's sign became marked in both legs and there was a slight petechial eruption. Morphin was given. Leucocytes, 43,500. By lumbar puncture 30 c.c. of cloudy cerebrospinal fluid was withdrawn and 30 c.c. of antiserum injected. The cellular content of the fluid was mainly polymorphonuclear leucocytes. There were a number of large mononuclear lymphocytes. Meningococci were not numerous and all observed were intracellular. Some stained very intensely, others seemed mere shadows within the protoplasm of the leucocytes. Cultures on plain agar and on agar plus 2 or 3 c.c. of patient's blood gave no visible growth in forty-eight hours.

March 19: Rested quietly during previous twenty-four hours. Had taken four ounces of milk and some beef-tea. Mind fairly clear; Kernig's sign marked in both legs; eyes straight; leucocytes, 23,532; petechial eruption on body. On lumbar puncture fluid flowed but slowly through a needle of rather large caliber; not more cloudy than on day previous; slightly blood-stained; 15 c.c. withdrawn, when, on account of its slow flow and her improved condition, we did not attempt to obtain more spinal fluid, but injected 15 c.c. of the antimeningococcus serum. Cultures on agar and on agar plus 2 or 3 c.c. of patient's blood showed no growth. Smears from the spinal fluid showed a preponderance of polymorphonuclear leucocytes, there were many very large cells, each with a large single nucleus and some small lymphocytes. Meningococci were not numerous; they were intracellular; some stained darkly, others hardly at all; they were about the same in number and staining as on day previous. The large mononuclear cells were larger and more numerous than on the previous day.

March 20: Had a good night and took nourishment. Complained only of severe headache. Eyes were straight, but there was some retraction of head and contracture of legs. Temperature, 98.6 F. At 4 p. m. was very restless and complained bitterly of headache. Lumbar puncture was performed and 45 c.c. spinal fluid withdrawn. It flowed freely as though under increased pressure and was less cloudy than on previous day, 30 c.c. of antiserum injected. The smears were poorly stained, polymorphonuclears were numerous; no meningococci observed. Cultures on plain agar and on agar and blood gave no growth.

March 21: Had a good night and felt much better.

March 22: Got much worse during the night. Died at 10 a. m. She should have had serum March 21, but our supply was exhausted.

CASE 16.—(Drs. Barber and Miller, March 21, 1908.) M. S., aged 6, girl. On the evening of March 20 did not feel quite well; ate no supper. Next morning complained of being chilly, but had no well-marked chill. Much worse at 11 a. m.; restless, complained of headache; vomited almost a chamberful of yellowish, slimy fluid. Was somnolent most of the time, but would have attacks of clenching of hands and drawing back of head. Threw herself about the bed and off it once. Was unconscious during these attacks. These convulsions continued until serum was given, none after that. The child's home is in the country, twenty miles from Porterville. She came to Porterville, Monday, March 9, twelve days previously, and remained in town about four hours. She was first seen by us at 4 p. m., March 21. There was unconsciousness, retraction of head, and marked Kernig's sign in both legs. Blood examination showed leucocyte count of 51,800. Lumbar puncture was performed and cloudy spinal fluid was withdrawn. This was tinged with blood which appeared to come from the puncture, as the fluid shortly became free from blood. Thirty c.c. withdrawn and the same amount of antiserum injected. Many polymorphonuclear leucocytes were found; micro-organisms not numerous.

March 22: In the morning the temperature was 101.2 F., pulse 112, and respirations 24. Eyes were straight, but sensitive to light; Kernig's sign marked bilaterally; head slightly retracted; took water. Was rational for a time. At 4 p. m. 12 c.c. of spinal fluid was withdrawn and 30 c.c. of antiserum injected.

March 23: Slept all night and sat up and drank milk in the morning; was rational; eyes were straight. Took an interest in her surroundings. Kernig's sign present in both legs, but less marked than on previous day. Head was slightly retracted. Temperature 101, F., pulse 120, and respirations 26. At 4:30 p. m. lumbar puncture was performed and 20 c.c. of spinal fluid withdrawn; 30 c.c. of antiserum injected. The fluid was much clearer than before. The most frequent cells were polymorphonuclear leucocytes, there were some small mononuclear cells and some large ones, with pale-staining nuclei. No micro-organisms were found. Blood count showed leucocytes, 20,000. Culture on agar gave no growth. There was an urticaria on the lower limbs.

March 24: Rested badly previous night on account of urticaria; eyes straight; rational, Kernig's sign slightly more marked than on previous day; head slightly retracted; temperature 99 F., pulse 112 and respirations 24. Took meat broth. At 4:30 p. m. bloood count showed leucocytes 22,660; lumbar puncture performed and only 6 c.c. of slightly cloudy spinal fluid was obtained; 30 c.c. antiserum was injected. There were but few cells and no micro-organisms.

March 25: Pulse, respiration and temperature were normal. Felt very well; legs showed slight Kernig's sign. The persistent leucocytosis of previous day may have been maintained by a chronic otitis media, which the child has had for a month or more.

March 29: Improvement had been progressive each day. There were no signs of meningitis. She seemed entirly recovered.

The following is a summary of the cases:

Case.	Sex.	Age.	Duration.	Lumbar Puncture	Total c.c. Antiserum used.	Result.
1	F.	21	24 hours	0	0	D*
2	M.	14	29 hours	0	0	D
3	M.	21	4 days	+	0	D
4	F.	40	12 hours	0	0	D
5	F.	23	7 hours	0	0	D
6	M.	23	27 hours	0	0	D
7	M.	22	3 days	0	0	D
8	F.	7	4 days	+	0	D
9	F.	4	3 days	0	0	D
10	F.	13	24 hours	0	0	D
11	M.	8	7 days	0	0	R*
12	F.	6	8 hours	0	0	D
13	M.	1	17 days	+	127.5	R
14	M.	8	5 days	+	45	R
15	F.	19	4 days	+	75	D
16	F.	6	7 days	+	120	R

* D: Died. R: Recovered.

We owe many thanks to Dr. Philip King Brown of San Francisco, who was much interested in our cases, and who made a 300-mile journey to see some of them. Through him we obtained the antiserum. Our small experience corroborated the wisdom of Dr. Flexner's instructions, namely, to use the serum as early as possible and to inject it into the spinal canal in daily doses of 30 c.c. whether the same amount of spinal fluid is obtained or not.

ARTHRITIS DEFORMANS OF THE HIP.*

A PRELIMINARY REPORT OF A NEW OPERATION.

FRED H. ALBEE, M.D.

Assistant in Orthopedic Surgery, College of Physicians and Surgeons (Columbia University); Instructor in Orthopedic Surgery, Postgraduate Medical School and Hospital; Clinical Assistant in the Hospital for the Ruptured and Crippled.

NEW YORK.

Arthritis deformans of the hip is a chronic joint disease which, contrary to former beliefs, attacks young and middle-aged adults as well as the aged. It is characterized clinically by a slow and gradual onset, absence of fever, local pain, muscular spasm, and wasting, stiffness, disability and deformity, but never presenting any tendency to suppuration. It may or may not be associated with similar conditions in other joints.

This condition has been known by many names; the most common one is coxitis senilis, which, implying that it is a disease of old age only, is misleading and not appropriate. A few of the many synonymous terms are rheumatic or rheumatoid arthritis, rheumatic gout, osteo-arthritis, nodular rheumatism, etc. The term I have chosen is as simple as any and appears to be the most expressive. It indicates a deforming pathologic process in a joint, whether it be trophic or inflammatory.

THE ETIOLOGY.

The true cause of this affection is still obscure. It has been ascribed to gout or rheumatism, to exposure or traumatism, of which injury certainly plays some part. I am convinced from my own experience and the statistics of others that old age plays only a small part. Blodgett, in 1903, reported ten cases, in which the onset of disease occurred in two under 30 years of age, in two between 30 and 40, in three between 40 and 50, and in three between 50 and 60.

Whether the point of origin of arthritis deformans is in the synovial membrane, the cartilage or the bone, is a matter still in dispute. Late authorities are inclined to consider it among the arthropathies of spinal cord origin similar to the Charcot joint associated with syringomyelia and tabes. While Schuller described a bacillus found in these joints, with which he has been able to produce similar processes in animals, his results have not been confirmed by other investigators. Dor has produced similar pathologic conditions by the injection of attenuated cultures of the staphylococcus.

PATHOLOGIC CHANGES.

In the early stages of this process the joint-fluid is increased, later it is diminished. Changes in the cartilage are noted early, cells multiply and the hyaline substance degenerates, rendering the cartilage friable. It takes on a yellowish appearance and the articular

* Read before the Surgical Section of the New York Academy of Medicine, April 3, 1908.

surfaces become thinned in the center, finally disappearing entirely. The head of the bone thus laid bare becomes smooth, polished and eburnated. Marginal ecchondroses or osteophytes appear and may become so large as to perforate the synovial membrane and become pedunculated or even detached, and appear as loose bodies in the joint. The head of the bone may become locked in the grasp of these bony outgrowths and motion be greatly interfered with, so much so that much wearing away of the head does not take place. On the other hand, if motion continues, the head may become flattened and in some cases almost entirely worn away, thus exposing the Haversian canals and presenting a worm-eaten appearance.

The acetabulum is deepened both by the wearing away of its floor and the ossification of the cotyloid ligament. In any event the motions of the hip are much limited and tend toward that of a cylindrical joint, on account of its anatomic changes.

The head wears away more and more and the marginal outgrowths progress toward the trochanter. In addition to this, the neck hypertrophies and may bend, thus forming more nearly a right angle with the shaft than normal. This event, as well as the wearing away of the acetabulum and the flattening of the head, results in an elevation of the trochanter above Nélaton's line and a consequent shortening of the leg. This actual shortening varies a good deal and averages about three-quarters of an inch. Blodgett's cases averaged five-eighths of an inch and varied from no appreciable shortening to that of one inch. Further than this, a very important feature is the consequent practical shortening and its resulting disability, coming from the deformity of adduction and flexion.

In a recent case this shortening amounted to 2¾ inches, while the actual bone shortening was one-quarter of an inch. This phenomenon, however, is not pathognomonic of arthritis deformans, but is a constant sequela of any chronic hip-joint inflammation. It is due to the continuous guarding of the joint by constant spasm of the surrounding muscles. Now as the adductors and flexors of the thigh are not only more powerful than their antagonists, the abductors and extensors, but exert their force at a better mechanical advantage, their action, if not prevented by treatment, causes an increasing adduction and flexion with permanent contracture or anchylosis.

THE SYMPTOMATOLOGY.

Arthritis deformans begins with pain in and about the joint, often shooting down the course of the sciatic nerve. Movements of the joint beyond a certain arc are painful and a distinct limp occurs early. External rotation, abduction and hyperextension are particularly painful and later in course of the disease much limited. Muscular atrophy comes on early, and the buttock of the affected side becomes flaccid and flattened. The arc of motion gradually diminishes, until finally the joint may become entirely stiff. In the earlier stages abduction and apparently lengthening rarely may be present, as in tuberculous hip disease.

The amount of pain and the effusion in joint varies greatly. A peculiar crepitation produced by the rubbing of the roughened synovial membrane and osteophytes may be present when the leg is manipulated. Motion may be almost or entirely lost either from muscular spasm, grasp of the surrounding osteophytes, disappearance of the synovial membrane, or flattening of the head of the bone. A very important diagnostic point is the fact that if motion exists in the advanced cases it will be practically in one plane, that of flexion. The earliest limitation of motion is in abduction and rotation. This is explained mechanically, as above, by changes that make the joint, instead of a spherical one, practically a cylindrical one. Flexion may be moderately limited, whereas abduction and rotation of leg may be nearly absent. No other condition with slight bony shortening produces this symptom-complex. If, however, a complicating bending of the neck occurs, a skiagraph is the only means of diagnosing the condition from that of ordinary coxa vera.

DIFFERENTIAL DIAGNOSIS.

The acute form of arthritis deformans may simulate sciatica, articular rheumatism, gonorrheal arthritis, infectious arthritis and tuberculous hip disease. In sciatica the limitation of motion is governed by the pain produced by the movement of the sensitive parts and tension on the sciatic nerve. Extreme flexion of thigh, therefore, with the leg extended, is the only motion limited; hyperextension, rotation and abduction are not interfered with. The diagnosis from the other hip conditions mentioned is based on the uniformity of the symptoms of limitation of motion and acuteness and also on the history and the *x*-ray appearances. The skiagraph of arthritis deformans of the hip is an exact profile view of the gross pathologic and anatomic changes described above and is of the greatest value in diagnosis.

TREATMENT.

The treatment demanded is first to relieve pain and, second, to correct the deformity, and should be both general and local, the latter being the more important. As in so many cases the condition is caused by an injury, it naturally would seem advisable to avoid further traumatism by protecting the joint. Rest in bed, with traction apparatus if necessary, will do much toward relieving this discomfort. The stiffness in the early stages is due to muscular spasm and not anchylosis, and is diminished, therefore, by any measure that protects the joint. Traction is indicated when passive manipulation is painful and restricted by muscular spasm. The patient should lie in bed with weight and pulley arranged as for ordinary hip disease. The weight, approximately five pounds, should pull in the normal direction of the leg unless pain is caused or excessive malposition of the leg exists. In either event the traction should be in the line of the deformity.

After the pain and joint irritability have been controlled, which occurs in from two to four weeks, the patient then is allowed to go about with a leather or plaster spica bandage, with or without crutches, or, as recommended by Dr. H. L. Taylor, with a jointed supporting brace (Dows'), "which not only protects the hip-joint from pressure, but allows motion at hip, knee and ankle." In this way the patient is enabled to enjoy the benefit of fresh air and mild exercise. If progress is not satisfactory and pain returns, rest in bed and traction should be instituted again, with a subsequent return to a brace. It should be understood that it is usually necessary to carry on brace treatment for a very long time.

Other therapeutic measures must be regarded as only accessories. Deep vibration, however, has been efficient in my hands not only as an accessory, but in a few very mild cases as the only therapeutic agent. High fre-

quency electricity will occasionally diminish or relieve pain temporarily. A certain number of progressive and very advanced cases, associated with marked deformity and disability, demand operative treatment. The same is true of another class of patients, such as working men, with dependent families, who can not submit to the long brace treatment even if there are good chances of its being effectual. A resection of the upper extremity of the femur has been practiced on many of these patients with uncertain results. Anatomically this produces a delayed anchylosis, a new and rather unstable joint or a dislocation with considerable shortening in either instance, and in many cases a continuation of the old pain. Those results which terminated in anchylosis have been observed to be the most successful, both in respect to comfort and efficiency. Other operations have been to trim away the bony outgrowths from the rim of the acetabulum, or to do the so-called Murphy operation of turning a flap of fat and fascia in between the acetabulum and the head of the femur.

ILLUSTRATIVE CASE.

Patient.—Mr. M. N, aged 59, was referred to me in October, 1906, by Dr. Moriarty of Waterbury, Conn.

History.—An examination revealed an advanced case of arthritis deformans of the right hip. The brace treatment was recommended and explained to patient and refused on the ground that the treatment was so long and uncertain for a working man. Eleven months ago patient again came to me

Figure 1.

Figure 2.

Fig. 1.—The broken lines indicate the amount of bone to be removed. It is removed from the head and the acetabulum in different planes, in order to secure the desired abduction of the thigh, when the freshened bone surfaces are brought together.

Fig. 2.—Apposition of the freshened bone surfaces after the removal of the bone from the head and the acetabulum and the femur placed in slight abduction.

with the inquiry if something could not be done for him. He was admitted to the Postgraduate Hospital May 14, 1907, and gave the following history: Policeman for twenty-five years. Three years ago first began to notice pain and stiffness in right thigh and hip. Soon after this he went to Mount Clemens, where he took a large number of baths. General health was improved, but pain continued. Twenty-two months ago he was examined by physician and told that his right hip was dislocated and the right leg was two inches shorter than left. Symptoms became so severe that in December, 1906, the patient went to New Haven and submitted to an operation, the nature of which could not be ascertained. Symptoms of lameness, stiffness and pain had continued unabated ever since.

Examination.—A muscular man, weighing 185 pounds, pale and careworn, walked with a marked limp. Right shoe built up with cork 2½ inches. Long linear scar noted over right trochanter. Actual bony shortening of right leg ¼ inch; practical shortening 2¾ inches. Leg much atrophied and markedly adducted and flexed. Motion in any direction entirely absent, except for slight flexion. Attempts at passive motion painful. Some muscular spasm. A skiagraph showed the head of the femur much worn away and flattened with many bony outgrowths about rim of acetabulum.

Treatment.—In view of the disintegration of the joint, the marked adduction and flexion with firm contractures, the progression toward bony anchylosis, with the leg in faulty position, in a man so large and powerfully built, it seemed best to aim for immediate firm anchylosis, with the limb in a position of slight overcorrection of the deformity to compensate for the existing practical shortening. The operative indications, therefore, were to devise a procedure which would, if possible, fulfil the above requirements and at the same time produce of itself as little real bony shortening as possible. With the foregoing desiderata in mind the following operation was done. The hip joint was reached by an anterior incision five inches long, through skin and subcutaneous tissues, starting from just below and inside of anterior superior spine of the ilium, and extending downward along the inner border of the sartorius muscle, which was retracted outward. The muscles and the deep structures were separated by blunt dissection and the iliacus and the rectus femoris muscles were retracted inward. A part of a large ring of osteophytes about the rim of the acetabulum were turned upward with the soft tissues adherent to them as it seemed wise to leave as many as feasible on account of their bone-forming possibilities. In so thick a thigh, with the presence of so much bony outgrowth, it required some care to locate definitely the joint and head. With the head of the femur *in situ* about one-half of its upper hemisphere was removed with a large chisel, through a plane nearly parallel to the long axis of the neck of the femur. Then with the same instrument the acetabulum was transformed into a flat-surfaced roof against which the fresh surface of the head was finally brought into firm contact by abduction of the thigh. The bone was removed from the acetabulum so that the flat surface was tilted somewhat upward internally in order to produce in a way, locking of the fragments and also to prevent any possibility of dislocation. Further abduction was found impossible on account of the shortened adductors and an open tenotomy of these tendons and muscles, at their origins, was found necessary before the leg could be brought into proper position. The plain surfaces of the head and acetabulum were brought together by simply abducting the thigh. The capsule and soft tissues were then sutured. Access to the joint was much facilitated by a position of extreme adduction of the limb. For purposes of orientation an assistant was kept in constant readiness to rotate the femur when desired. The leg in strong abduction was finally put up in a spica from axilla to toes.

Subsequent History—Patient made an uneventful recovery and was walking about with crutches at the end of four weeks. A short spica bandage was applied at the end of five weeks. At the end of nine weeks he was able to walk without cane or crutch and he went back to work as patrolman in four months. He states that he has not suffered any pain since operation. The leg has remained well in corrected position and only an extra lift of leather has been worn on the heel. His occupation since the operation vouches for his locomotive abilities. He has continued as a patrolman, working nine hours a day, and has not lost a day on account of his hip since he went back to work in September, 1907.

ADVANTAGES OF OPERATION.

The preceding operation has the following advantages: First, it assures bony union by bringing two large bony surfaces together for anchylosis and holds them firmly by the mere correction of the deformity. Second, it produces a minimum amount of bony shortening. Third, dislocation is impossible. It excels complete excision in all these respects.

I have done the operation five times. The cases were all those of advanced arthritis deformans, although I think the operation is adapted to certain other conditions. The ages of the patients have been, respectively, 30, 60, 63, 55 and 67 years. The shock has been very slight in every case, which I think is accounted for by the fact that the joint is not disarticulated and there are very few structures cut. In every case the pain has been entirely relieved. All the wounds have healed by

first intention. The second and third patients to be operated on reported by letter a few days ago that they were walking without the aid of crutches and without pain. They are, however, still wearing short spicas. It is seven weeks since the operation on the fourth patient. He is in a short spica and uses crutches, but can bear his whole weight on the affected leg without pain. The fifth patient, a man 63 years of age and weighing 216 pounds, was operated on six weeks ago and is still in the hospital. He is wearing a short spica and has been walking on crutches for ten days. He can bear his whole weight on the affected leg without pain.

125 West Fifty-eighth Street.

THE EYE AS A CONTRIBUTING FACTOR IN TUBERCULOSIS.*

F. PARKE LEWIS, M.D.

BUFFALO, N. Y.

The almost universal prevalence of tuberculosis, the enormous death rate, together with its possible prevention and cure, have focused the attention of the world on this disease in a way and to an extent unique in the history of medicine. The opportunities for infection are so frequent, and the number of recoveries in which the healed lesions are recognized only postmortem are so numerous, as to justify the German-folk saying, *"Jedermann hat am Ende ein bischen Tuberculose."* It is evident, then, that some other element than that of infection merely must influence the course of this disease, otherwise, as almost every one is exposed to infection, the world would become a mortuary from this cause alone. It is generally recognized, however, that any condition which lowers the vital resistance or increases what Jonathan Hutchinson calls the "vulnerability," predisposes to infection and retards recovery.

Among the earliest symptoms of beginning tuberculosis are increased pulse rate and a loss of weight. Even before a local lesion has become sufficiently pronounced to be detected the rapid pulse and malnutrition are signals of the on-coming storm.

The importance, then, of recognizing any other existing conditions that can increase the pulse rate or interfere with digestion and nutrition will be self-evident. It may have a bearing, too, that it is by no means a settled question that the respiratory tract is always the port of entry of bacillus in pulmonary tuberculosis.

J. Vernon White[1] says that "the investigations of a number of recent authorities seem to show that tuberculous infection through the alimentary canal is of very frequent occurrence," and that "tuberculosis due to the bacillus that enters the lungs with breathed air is an unknown affection." As both these opinions are based on the same facts, known to all pathologists, it is evident that there are unknown factors which prevent agreement in the interpretation of what is already known.

This paper is based on the following propositions:

1. Errors of refraction, or marked muscle imbalance, may so disarrange the nervous functions that gastric or intestinal disturbances may result, and metabolism be retarded in consequence, with lowered resistance and increased susceptibility to infection.

2. The continued existence of such conditions, especially in the neurotic, may so lower the vitality as to retard recovery from tuberculous infections of the lungs.

3. Relief of the abnormal visual conditions is a necessary prerequisite to recovery from pulmonary disease.

4. In view of these facts the complete examination of a suspected tuberculous patient has not been made until the condition of the eyes, including the refraction and dynamics of the ocular muscles, has been investigated and carefully recorded.

The conclusions on which these premises are based have a practical application.

The following two cases, which are typical of many, will illustrate, first, the causative relation of eyestrain to disturbed digestion and assimilation, and, second, the importance of both in tuberculosis:

CASE 1.—Eyestrain due to anisometropia causing gastric and intestinal indigestion.

Patient.—F. L., aged 33, principal of high school.

History.—About ten years ago he began to have severe pains in stomach. These would be relieved after eating, but would recur, with increased severity, in a few hours. This gradually grew less for four or five years, when he began to have attacks of nausea after eating, with a disagreeable "sour feeling" in the stomach. His digestion was always better when he did not use his eyes. Absolute rest for one day from close work was always followed by relief of the stomach symptoms. While walking on the street at times he would have blind attacks, with pain in and about the eyes. After half an hour, the blur would disappear, and he would become nauseated, with intense headache. Dietetic and medicinal treatment seemed to afford him little relief.

Examination.—A cycloplegic test showed hyperopic astigmia with anisometropia. R. V., + 0.50 D. cyl. ax. 75 V. = 20/20. L. V., — 0.37 D. cyl. ax. 120 V = 20/20. Muscle balance was normal.

Subsequent History.—After wearing corrective glasses for a week all these disagreeable symptoms disappeared and did not return. After six months, a slight acidity of the stomach suggested a re-examination of his eyes, when a change in the axis of the cylinder of the right eye was found, it having turned from 75 to 90 degrees. Since wearing the glasses, his metabolism had so improved that he had gained fifteen pounds in weight. The indigestion could be brought on again at any time by leaving off his glasses, if only for a few hours.

The second case shows the influence with a like condition exercised when associated with tuberculosis:

CASE 2.—Compound hyperopic astigmia-anisometropia, causing impairment of digestion and metabolism, and preventing recovery in pulmonary tuberculosis.

Patient.—Mrs. J. S. P., female, aged 25.

History.—In 1905 she developed a tuberculous condition in the apex of one lung, and was immediately sent to the Adirondacks and put under competent care. The usual treatment, that of an absolutely outdoor life, with superalimentation, was followed. She suffered constantly from intestinal indigestion and malassimilation, continued to lose weight, and in October was much worse than in May. It was determined that she should spend the winter in California, and *en route* came from her father's home in Rochester to Buffalo for relief of an eyestrain of which she had recently become conscious.

Examination.—Under cycloplegics, the following condition of anisometropia was found: R. V., + 0.50 D. sph. ⌒ + 0.75 D. cyl. ax. 165 V. = 20/20; L. V., + 1.00 D. sph. ⌒ + 1.75 D. cyl. ax. 165 V. = 20/20. Esophoria of 3 degrees was present. For nearly three months she had suffered persistently from nausea, with constant intestinal indigestion. She was so weak and nervous that she was obliged to lie down for several hours before she could have her refraction taken. Her pulse was exceedingly rapid and weak.

Subsequent History.—It was found that she could take a full correction, and two days later started for New Orleans.

* Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

* This paper was discussed with the paper by Dr. Parker and the discussion will follow Dr. Parker's paper which will appear next week.

1. New York Med. Jour., Nov. 2, 1907.

The nausea immediately disappeared. For the first time in her life she was able to take a railway journey without suffering from car sickness. With a disappearance of the nausea the indigestion ceased, assimiliation became normal, weight increased, and she returned in the spring, having gained fifteen pounds and fully recovered in every way. She can not go without her glasses without having a return of her old symptoms of indigestion.

If the theory advanced in this paper is correct, that the effort to use abnormal eyes may disturb the nervous currents elsewhere, and if the proportion of tuberculous people who suffer from eyestrain is at all large, its bearing on the general problem of tuberculosis is one of enormous importance. It is a generally accepted truism that any agent or condition which undermines the integrity of the nervous system will increase the susceptibility to disease, and the neurotic appears to be peculiarly vulnerable to tubercular infections.

In support of this contention, Clifford Albutt, discussing a variety of phthisis, says: "I began to find in my own practice and in the writings of alienists how large a part phthisis plays in neurotic families. Even then, however, it did not occur to me to associate any particular form of phthisis with neurotic disorder until a few striking cases of unclassable variety occurred in neurotic families under circumstances which spoke too eloquently to be overlooked. If we go a step further and ask for a pathologic explanation of these facts we approach a land of darkness."

It is not the purpose of this paper to discuss tuberculosis as a neurosis, but to demonstrate how important nervous conditions are in this disease, and to indicate that the eyes may be an important element in producing these conditions. Concerning the truth of this proposition, the mass of confirmatory testimony is so great that it is now very generally accepted, both by ophthalmologists and practitioners of internal medicine. Baker[2] reports 100 cases of migraine relieved by the correction of errors of refraction, and Musser has said that "functional gastric disorder is very rarely a primary trouble." Stockton was the first to point out the relation of eyestrain to digestion. In 1894 he said that the causes of functional gastric disorders are usually some reflex irritation or some toxemia. Max Einhorn, in 1893, described, under the title "achylia gastrica," a most important condition of the stomach, later described by Dr. Allen A. Jones as "gastric anacidity." The majority of the cases reported by Dr. Jones, together with several others included in the above-mentioned series, were examined as to the existence of eyestrain. Without a single exception, there was found to exist a definite and relatively uniform ocular defect, viz., unsymmetrical astigmatism of high degree, varying from one to five diopters. Cohn[3] emphasizes this by saying: "The visual apparatus is in closest connection with the other higher nervous mechanism, and the slightest disturbance of the visual portion may produce irritation in the entire motor, sensory and psychic systems." It may be conservatively stated, then, as the conclusion of the best American investigators, that eyestrain is a frequent cause of impaired metabolism.

The importance of eyestrain in the tuberculous being recognized, the natural inquiry which would follow is as to its frequency. Here we have absolutely no statistics. In none of the institutions established by public or private beneficence for the investigation or treatment of tuberculosis, in none of the reports which have been issued by individuals or associations, and by none of the authorities, so far as it has been possible to learn, has an exact examination with record of the condition of the refraction and of the dynamics of the eye muscles been considered an essential part of the anamnesis.

It can not be assumed that the tuberculous are more free from visual defects than are the non-tuberculous, and Gould says that he has never yet seen a mechanically perfect eye. How general visual disturbances, of such an extent that they may not be considered negligible quantities, are, is evidenced by the fact that refractive tests constitute from 60 to 70 per cent. of our daily work as ophthalmologists, while the attempted adaptation of lenses to eyes requiring their help occupies practically the entire time of opticians.

It is absurd, then, to ignore the existence of focal defects in the tuberculous or to minimize their importance. Yet in the Henry Phipps Institute, Philadelphia, where the examinations are conducted with the most scrupulous care and the reports are most detailed, the requirements seem to be met by recording the color of the eyes (an item of questionable value), and noting whether or not the pupils are dilated or unequal. Concerning the latter, the observations are most interesting and it would seem to lead one to think of further investigations: "The matter of dilated pupils and of unequal pupils as symptoms of tuberculosis," says the report of 1906, "receives our support from the table, but only in regard to frequency of occurrence. No light is thrown on the cause of the phenomenon nor on the relationship of the disease. It is not even clear that they actually are symptoms of tuberculosis. Occurring in some cases and not in others, it is possible, and even probable, that they may be due to mixed infection or some complication."

The third report, that for 1907, shows that among 885 new patients 208 had dilated pupils, 399 had not, and of 278 no record was made. In 55 patients the pupils were unequal. "Dilated pupils," says the report, "for this year have occurred in about one-third of the patients of whom a record has been made as to the pupils. Unequal pupils have been recorded infrequently. Much has been said as to the condition of the pupils in tuberculosis by some writers, and statistics are here presented with a view of getting some light on the subject. So far we can draw no conclusions. We do not even know to what the phenomenon is due. Usually it is ascribed to muscular weakness." One year, therefore, we find the accommodative weakness manifesting itself in enlargement of the pupils, ascribed to a toxemia which must have a remarkable predilection for particular nuclei of the third nerve, and the next year to a muscular weakness which is equally speculative.

Is it not amazing that with such a specific assurance that the visual mechanism is in trouble, investigation should cease and vague and variable surmise serve as a basis from which to guess the etiology?

A dilated pupil is often associated with myopia. Astigmatism is the turnstile, as Risley says, through which the eye passes in achieving myopia. Exophoria and dilated pupils are definitely correlated, and this combination works such disaster in the midbrain as often to be nerve wrecking. It is not essential that we should know the channels through which the irritation is carried in order that we may appreciate the fact that eyes organically unlike, in an endeavor to blend images in

2. A statistical inquiry as to the Relief and Cure of Migraine by the Correction of Errors of Refraction, Academy of Ophthalmology and Oto-Laryngology, 1906.
3. Physiological Therapeutics.

the cortex, will cause nausea, vertigo, hyperacidity or subacidity of the stomach, and intestinal indigestion. These are matters of daily experience in the practice of every ophthalmologist. That long neural band, the fasciculus longitudinalis, originating anterior to the nuclei of the third nerve and extending back till it is lost in the medulla is probably the medium by which the root organs of the various cerebral nerves are connected. That some such connection exists has been clinically demonstrated. When the eyes are organically different an excess of energy, equal to the difference between the better and the most abnormal eye, must be sent to both. Under such conditions the endeavor to maintain the parity between accommodation and convergence results in ciliary spasm or ciliary relaxation. It is probable that the one is associated with esophoria, the other with exophoria. The unconscious effort or paresis, as the case may be, of one set of muscles or fibers is reflected to other and remote sets. If one makes a strong effort to clench one hand very tightly he will find that he is unconsciouly closing the other. The effect of tension within the eye, or of relaxation, seems to be reflected particularly to the non-striated muscular tissue, and as a result a contraction or a relaxation of circular fibers follows. This is true of the vasodilators or vasoconstrictors of the capillaries, of the circular fibers of the stomach or of the intestines, of the urethra and of the uterus. Hence follow local congestions or local anemias, cramp of the stomach or catarrh of the stomach, constipation or diarrhea, incontinence of the urine, and in several instances I have seen pregnancy, after many years of sterility, follow the relief of an eyestrain that could be explained only on the basis of a relaxation of a persistent contraction of the circular fibers of the cervix. With these far-reaching nervous involvements, inadequacy of metabolism as an element in tuberculosis assumes an added importance whether or not Ravenel[4] is correct in his contention that "the alimentary tract is a frequent port of entry for the tubercle bacillus," for the same conditions that disturb the nervous functions of the digestive tract will involve nerve supply of all of the essential organs, and given a neuropathic diathesis we have the conditions prepared for the reception and culture of the infective organism.

CONCLUSIONS.

The essential propositions which these conclusions warrant are:

1. The inadequacies of focus or the motility of the eyes may give rise to and be responsible for disturbances of digestion and assimilation.

2. Lowered vitality, especially in the neurotic, predisposes to tuberculous infection, and as superalimentation is of first importance in effecting a cure, an exact and complete examination of the refraction and of the motility of the eyes should constitute an essential part of the examination of every patient suspected of having this disease.

3. If these are the views of the ophthalmologist on this subject they are of such vital importance to a vast number of sufferers that resolutions to that effect should be adopted, and the recommendation made to this Association that it is the sense of the members of this section that no examination for tuberculosis can be considered complete until it shall include the refraction and the motility of the eyes.

4. Am. Jour. Med. Sc., October, 1907.

OCULAR REACTION TO TUBERCULIN.*

FREDERICK TICE, M.D.
Professor of Diseases of the Chest, College of Physicians and Surgeons.
CHICAGO.

At a meeting of the Berlin Medical Society, May 8, 1907, von Pirquet[1] described his method of vaccinating, using a preparation of tuberculin, and reported 360 cases, all children, in which it had been tried. Of these clinically diagnosed "tuberculosis" a positive result was obtained in 88 per cent. The negative 12 per cent. occurred in the miliary cases or in those patients with cachexia, while 167 of the "unsuspected" gave positive results. In the discussion Wolff-Eisner[1] called attention to the possibility of obtaining a reaction to tuberculin when applied locally to other parts of the body and reported having observed such when a 1 to 10 dilution was used in the eye of a hay fever patient. This he had observed frequently and he described the reaction as consisting of a conjunctivitis, a chemosis, while in some cases the patient presented the condition observed in a general reaction from the subcutaneous administration of tuberculin.

Vallée[2] was able to confirm this statement by his work on cattle and horses, but doubted its utility or feasibility as a test in man, or even in the lower animals, on account of the pronounced inflammatory reaction. Calmette,[3] of Lille, France, at a meeting of the Académie des Sciences, described the method as modified by him, in which he advocated a 1 per cent. solution of purified tuberculin, the reaction being so mild that it could be used in man. Since that time much work has been accomplished, principally by the French and Germans. More recently reports have appeared in the English and American journals.

The reaction described by Calmette, aside from the name of the author, is also known as the "Ophthalmo tuberculin," the "Oculotuberculin" and the conjunctival or ophthalmic reaction to tuberculin. At this time it may be of service to consider some of the factors of importance in connection with the work.

DESCRIPTION OF THE REACTION.

As described by Calmette, the reaction consists of a slight redness and swelling, chiefly of the caruncle and the inner canthus, but also involving the conjunctiva. Aubaret and Lafound,[4] Aubaret and Magne[5] have subdivided these cases into four classes, depending on the degree of the reaction. Sabrazés and Dupérie[6] classified them as mild, medium and severe.

Varying according to circumstances and conditions, various results appear in the eye when the test is made. When the reaction is negative no changes whatever occur. A negative reaction may become positive by repeated instillations, even in the normal individual, or a negative reaction may become positive after the subcutaneous administration of tuberculin. When the reaction is positive the appearance is quite variable. In some only a very slight swelling and redness of the caruncle or surrounding portion of the conjunctiva may occur. The vessels, particularly those of the bulbar conjunctiva, are distended and appear more distinct.

* Read before the Chicago Medical Society, Feb. 26, 1908.
1. Berl. klin. Wchnschr., 1907, xliv.
2. Acad. d. sci., 1907, cxliv, No. 24.
3. Acad. d. sci., 1907, cxliv, No. 24; Presse méd., 1907, No. 49.
4. Gaz. hebd. d. sc. méd. de Bordeaux, Aug. 4, 1907.
5. Jour. de méd. de Bordeaux, Aug. 25, 1907.
6. Gaz. hebd. des sc. méd. de Bordeaux, July 21, 1907.

When the reaction is more pronounced the swelling and redness become much more marked, resulting in an inflammatory condition. The lids may become much swollen, the eye partially or completely closed, and a chemosis may be present. The congestion is more pronounced than in the mild cases, and on the involved surface a deposit of fibrin may be found. An increased lachrymation and photophobia are associated features. In the severe reactions the changes become more marked, sometimes extreme. Actual pus formation with ulceration has occurred in the severest cases. In only two of the observed cases did the reaction become marked and severe, and even then not sufficient to require special attention.

The fever and other conditions manifest in a general reaction to the subcutaneous injection of tuberculin are absent. Pupillary changes are not obtained as a rule. Generally the patient complains of little or no discomfort in the eye, more than a very slight burning, a scratching or a sensation of fulness or tightness, unless the changes are pronounced.

TIME OF THE REACTION.

The time that elapses between the administration of tuberculin and the reaction varies from three or four hours to thirty-six hours or even longer. In the majority of cases the reaction reaches the acme in eight to fourteen hours. Usually by the third or fourth day the eye has returned to apparently normal. Wiens and Gunther,[7] Eisen,[8] G. Serafini,[9] A. Napier[10] and others report cases in which the reaction has been much prolonged and with resulting effects in the eye. In one of the cases reported by Serafini, a young man with mild pulmonary and glandular involvement, the local findings were much intensified.

FORM OF TUBERCULIN EMPLOYED.

In some of the earlier cases dilute old tuberculin was employed. This was done partially from lack of knowledge and partially from the difficulty of obtaining a proper preparation. The ordinary tuberculin is not suitable, as the contained glycerin, as well as perhaps other substances, may produce a condition simulating a positive reaction. McLellan[11] claims that 1 per cent. of the old tuberculin is non-irritating to the eye.

Calmette, in his original communication, recommended the use of the precipitated or purified tuberculin, which may now be obtained in powder, tablet or liquid form ready for immediate use. The tablets contain 10 mg. of the dry purified tuberculin, and added to 1 c.c. of sterile water or physiologic salt solution make a 1 per cent. suspension, as the tuberculin is insoluble. As sterile water is irritating to the normal eye, physiologic salt solution is to be preferred. Since the preparation is only a suspension, it is necessary that it be frequently agitated, otherwise the supernatant fluid will contain little or no tuberculin and produce questionable results. It is best always to make a fresh preparation, although one several days old has given positive results. The liquid form is marketed in glass containers similar to the vaccine tubes. Of the three, the tablet form is probably the most convenient and was employed in the present work.

7. München. med. Wchnschr., 1907, liv.
8. Beitr. z. Klin. d. Tuberk., viii.
9. Gior. d. r. Accad. di med. di Torino, November, 1907.
10. Glasgow Med. Jour., January, 1908.
11. Brit. Med. Jour., Dec. 7, 1907.

THE DOSAGE AND TIME OF ADMINISTRATION.

Calmette recommends that one drop be instilled into the eye. Wiens and Gunther, as the result of their experience, urge that a 0.5 of 1 per cent. suspension be used, as in a number of their cases the patients presented severe reactions and changes in the eye that continued for at least three months. Schenck and Seiffert[12] used three strengths, 1 per cent., 2 per cent. and 4 per cent., using the weakest first and stronger for subsequent tests if a negative result was obtained.

This in great part is determined by circumstances. As the early and slight reactions may appear within five or six hours, it is best employed early in the day. This permits of the examination being made in daylight, which is often of great assistance in the doubtful cases. When possible all patients should be examined every two hours and in the best of light. In private and dispensary work the time may not be a matter of choice and the result often must be determined by an assistant or nurse. The dispensary cases are not included in the report.

METHOD OF ADMINISTERING.

This is not so simple as it may first appear. With a sterile medicine dropper one drop of the suspension is instilled into the inner canthus of one eye only, the other acting as a control and a means of comparison. There is no immediate discomfort from the instilled drop, but frequently the patient will close the eye quickly or forcibly or perhaps rub the eye. To prevent this the lower lid is drawn downward and held for some seconds until the drop is well distributed and the patient has become accustomed to its presence. In all instances the patient is cautioned not to rub or irritate the eye. When a negative result occurs the test may be repeated after the lapse of from six to ten days. As the examined eye, even in the normal, becomes sensitized by repeated tests it is advisable and necessary to try first one and then the other, never the same eye for two successive examinations.

In order to determine as far as possible the efficiency of the reaction a rather wide range of cases were selected. Only those under constant observation in hospital practice have been included in order that the findings may be more accurate. At least one-third of the tuberculosis cases were rejected as unsuitable for the test on account of the presence of a conjunctival hyperemia, conjunctivitis or some other eye disease. Referring to the tables it will be found that 153 patients have been examined, many receiving two or more instillations. Of these 54, or 35.4 per cent., gave a positive reaction.

In some of the patients with typhoid, cerebrospinal meningitis, gonorrheal rheumatism or secondary syphilis, and in whom tuberculosis was neither suspected nor revealed on careful examination, a well marked positive reaction occurred. Where it might have been expected to be positive, as in the cases of pleurisy, tuberculosis of the knee, hip, spine and cervical glands, it was negative. Pulmonary tuberculosis in some form was diagnosed in ninety-five cases, with a positive reaction in forty, or 42.1 per cent. It may be urged that the negative reaction indicates an absence of tuberculosis or a faulty diagnosis. Examination of the tables, however, will show that, in addition to the physical findings, the bacilli were present in forty-two cases. Here the con-

12. München. med. Wchnschr., 1907. liv.

dition can be hardly questioned, and of these just 50 per cent. gave a positive reaction. An attempt was made to determine in which form of pulmonary tuberculosis the reaction was most constant, but as far as could be judged there was no marked and constant difference which is not in accord with the findings of P. Eisen,[8] Wolff-Eisner and Teichmann,[13] and others.

TABLE 1.—FINDINGS IN MEDICAL CASES.

No. of Cases.	Clinical Diagnosis.	Reaction.	Remarks.
6	Typhoid fever	—	
1	Typhoid fever	+	Two instillations; marked.
9	Croupous pneumonia	—	Two instillations in two cases.
2	Pleurisy with effusion	—	
2	Pleurisy with effusion	+	Three instillations in one case, all marked. Both patients reacted very markedly.
1	Plastic pleurisy	—	
1	Cerebrospinal meningitis, lumbar puncture, diplococcus intracellularis in culture	+	Two instillations; marked.
1	Spinal meningitis (t. b. c.)	+	Three instillations; marked.
3	Diabetes mellitus	—	
4	Rheumatism, acute articular	—	
1	Rheumatism, gonorrheal	—	
1	Rheumatism, gonorrheal	+	Two instillations.
1	Sciatic	—	
2	Acute endocarditis	—	
1	Myocarditis	—	
1	Influenza	—	
1	Delirium tremens	—	Two instillations.
2	Hepatic cirrhosis	—	

TABLE 2.—FINDINGS IN SURGICAL AND ORTHOPEDIC CASES.

No. of Cases.	Clinical Diagnosis.	Reaction.	Remarks.
1	Tuberculosis of knee	—	
2	Tuberculosis of knee	+	One instillation, slight.
1	Tuberculosis of hip	—	Two instillations.
1	Tuberculosis of spine	—	
2	Tuberculosis of spine	+	One very marked.
1	Orchitis (t. b. c.)	—	
1	Cervical adenitis (t. b. c.)	—	Two instillations.
1	Tuberculosis of spine or syphilis	—	Two instillations.
1	Tuberculosis of hip with sinus-bacilli in pus	+	
1	Rectal carcinoma	—	

TABLE 3.—FINDINGS IN DERMATOLOGICAL CASES.

No. of Cases.	Clinical Diagnosis.	Reaction.	Remarks.
1	Lupus	—	
1	Syphilis, secondary	—	
3	Syphilis, secondary	+	One very marked.
1	Syphilis, tertiary	—	

TABLE 4.—FINDINGS IN ALL STAGES OF PULMONARY TUBERCULOSIS WITH PHYSICAL SIGNS.

No. of Cases.	Condition.	Reaction.	Remarks.
21	Bacilli in sputum	+	
21	Bacilli in sputum	—	
19	No bacilli in sputum	+	
34	No bacilli in sputum	—	
4	Bacilli in sputum	+	Instillations at first all negative; 1 mg. tuberculin given subcutaneously and positive ocular occurred in 4 (50 per cent.) without a second instillation.
4	Bacilli in sputum	—	

In two of the cases in which a very incipient tuberculosis was present repeated tests were all negative. If any difference existed the negative reactions occurred most frequently in the far advanced. Where the anemic condition was pronounced practically all were negative. In eight cases the subcutaneous administration of tuberculin produced a most positive ocular reaction in four, or 50 per cent.

These findings, compared with those of Calmette and many of the earlier investigators, are not as encouraging, while with the later reports the difference is not so great. P. Eisen obtained a positive reaction in 66.6 per cent., where the diagnosis of tuberculosis was certain and 31.1 per cent. of non-tuberculous affections also reacted.

On account of the limited number of cases and the incomplete state of the work I feel that I am not justified in making any positive statements, but a review of the reported cases and of my own forces me to certain conclusions which appear fair and just.

CONCLUSIONS.

1. As a diagnostic method Calmette's test is by no means positive or even specific. In a varying proportion of tuberculous cases of various forms a positive reaction will occur, but not in all. In differential diagnosis it can be of but limited service as it appears, apparently, in non-tuberculous affections. When the subcutaneous use of tuberculin in doubtful cases of tuberculosis is not possible on account of fever the ocular test may be employed. In my incipient cases in which an early positive diagnosis was most desired it was of no service.

2. Wolff-Eisner and Teichmann[13] have employed and suggest the reaction as a means of prognosis. They determined that when an active reaction took place in patients in the incipient and early stages of tuberculosis it indicated an active effort at protection and consequently was a favorable sign. A weak, slow reaction was found in the far advanced, in the first and second stages, when the resistance was poor. When no reaction took place it indicated that the resistance was still less. It would appear to me that a diagnostic means of so little value can have still less value as a means of prognosis.

3. In a review of the literature no reference is made to the therapeutic possibilities in this method of administering tuberculin. The absorption by the conjunctiva is rapid and considerable, as can be demonstrated in the use of other drugs. Just what effect ocular administration of tuberculin has on the powers of resistance as indicated by the opsonic index has not been determined. If the ocular reaction is analogous to the local or general reaction produced by subcutaneous injections of tuberculin, and it is found feasible to administer it in this manner, it may be found necessary to avoid the pronounced and severe reactions.

4. Concerning the cause of the reaction I have nothing definite to offer, as the work along this line has not yet been sufficient. Wolff-Eisner and Teichmann[13] in their work in determining the prognostic value of the test, consider the presence and intensity of the reaction due to the development of an endotoxin. Smithies and Walker[14] have suggested that the inflammatory reaction in the eye is produced by the action of endotoxins which are liberated by the action of the antibodies on the dead bacilli in the eye. As the reaction occurs apparently in patients in whom no tuberculosis can be demonstrated it may, like the reaction from subcutaneous use of tuberculin, belong to the "group reactions."

5. From all we can now judge, the ocular reaction to tuberculin must be considered simply as confirmatory and must always be considered secondary to the findings as determined by a careful physical examination.

I take this opportunity to thank various members of the attending and resident staffs of Cook County Hospital, especially Dr. Miller, superintendent of the County Tuberculosis Hospital, for the use of cases and the assistance rendered in the present work.

103 State Street.

13. Berl. klin. Wchnschr., Jan. 13, 1908.

14 THE JOURNAL A. M. A., Jan. 25, 1908, 259.

Clinical Notes

ATRIOVENTRICULAR DISSOCIATION FOLLOWING DIPHTHERIA.

A. D. DUNN, M.D.
OMAHA, NEB.

The following case is deemed worth reporting, as it suggests a cause of heart block hitherto unrecorded, so far as I know. The case was seen in the practice of Dr. Hombach, of Council Bluffs, Iowa.

History.—F. E., boy, aged 11, after suffering four days from a severe sore throat, was seen by Dr. Hombach, who found a membrane covering the entire right faucial pillar and tonsil with enlarged glands on the same side. Reaction to antitoxin was prompt, the membrane and lymphatic enlargement disappeared rapidly, and the pulse dropped gradually from 130 to 71 during five days of uneventful convalescence. At 9 a. m. of the ninth day the pulse was 56 and the temperature 98.9. During the night the patient had been restless, vomited, and had complained of pain in his abdomen. At 6 p. m. the pulse fell to 18 and there was an epileptiform convulsion lasting about ten seconds. The patient was unconscious for a few seconds. Under stimulation, the pulse gradually rose until 10 a. m. of the tenth day. The patient was then well nourished, rested quietly in bed, and said that he felt all right and desired to get up. Except for a fear that he was in danger of being hurt, an da slight cyanotic tinge, he appeared normal.

Examination.—This was made on the tenth day, and proved negative except in the following particulars: The radial pulse was 28; the wave was strong and well formed, but succeeded by a rather empty vessel. The area of heart dulness was not materially enlarged. The apex lay in the fourth interspace, a good finger's breadth within the nipple line. It was normal in size and was made up of the left ventricle. The right heart border (deep cardiac dulness) was flush with the right sternal margin. The apex beat was 28 a minute. All the heart sounds were clear. A muffled beating was to be heard between the regular beats in the second and third interspaces just to the left of the sternum. There were usually three of these faint sounds to one of the regular heart beats. They were heard nowhere else and were to be attributed to auricular contractions. The veins of the neck were pulsating rapidly. Two different pulse waves could be made out: (1) a negative venous pulse wave, the crest of which was presystolic, the deep trough systolic-diastolic; (2) more rapid slight pulse waves, three of which were to be seen to one of the other; the occurrence of a fourth was to be assumed at the maximum of the other wave. A count of this latter venous pulse gave 112 to the minute; the counter of the former was the same as of the apex beat. The carotid beat was synchronous with the trough of the negative venous pulse wave. Unfortunately no apparatus was available to make tracings. The auricles therefore were beating to the ventricles in the ratio of 4 to 1. The liver was palpable 0.5 c.m. below the costal arch and was somewhat tender. There was no pulsation. The temperature was 96.8.

Clinical Course.—With the exception of an occasional emesis and slight transient restlessness, the patient improved for twenty-four hours. During this time the temperature rose once to normal, and he seemed to be in fair condition except that the temperature had dropped once to 94 but soon returned to 97.3. At 6 p. m. of the eleventh day (second day of heart block), the pulse was 38 to 40; the temperature 97.2; the respiration 22. The auricles, as registered by the jugular pulse, were beating 80 to the minute. The auriculoventricular ratio was therefore 2 to 1 instead of 4 to 1 as recorded the day previous. A muffled beat was to be heard in the second and third left interspaces midway between the regular cardiac systoles. The area of cardiac dulness was not increased. The heart sounds remained clear. There was slight cyanosis; the liver was still somewhat enlarged and tender.

During the following night and day there was considerable restlessness and emesis. The patient grew weaker. For several hours the temperature was too low to register. The night of the twelfth day, the patient was more restless than ever; the pulse was weak and he complained a little of abdominal pain. At 6:35 a. m. of the twelfth day the pulse registered 36; the tempeature was 93.8, and the respiration 22. No thermometer readings could be obtained later, as the scale was not low enough. Death occurred at 11:30 a. m., after several tonic convulsions which lasted only a few seconds. Ventricular systole stopped fully two minutes before death. The patient was conscious and talking during this time. The fine pulsations of the veins of the neck continued. A tonic convulsion ended the scene in the midst of a sentence. Artificial respiration and precordial massage were instituted and a few beats were felt at the apex.

At no time during the course of the disease were there marked signs of cardiac decompensation. After the injection of the antitoxin there was no tachycardia or other signs of extreme myocarditis. An autopsy was refused. The case from its clinical manifestations was one of heart block. In the absence of a postmortem a more or less selective action of the diphtheria toxin on the bundle of His can only be assumed.

An investigation of the literature on the subject shows no similar case recorded. The case is reported merely to draw attention in postdiphtheritic bradycardias to auriculoventricular dissociation and to suggest a probable pathology for certain cases.

DEVICE FOR FILLING BLOOD PIPETTES.

W. F. THOMSON, M.D.
BEAUMONT, TEX.

The accompanying illustration shows a simple little instrument that I have found very satisfactory and accurate in filling blood pipettes. The apparatus consists essentially of a blood pipette from a Thoma-Zeiss hemocytometer and the ordinary metal barrel and plunger of a hypodermatic syringe, supplied with a pinion. The pinion was made and attached to the syringe by a local jeweler. To the pipette A is comented the metal ferrule B, into which screws the syringe C. The plunger of the syringe is operated by the pinion head E working in the notched piston shaft D.

In filling the pipette the instrument is held by the

A simple device for filling blood pipettes. A, blood pipette; B, metal ferrule; C, ordinary metal hypodermatic syringe; D, notched plunger shaft; E, milled screw-head of pinion.

third and fourth fingers, the thumb and index finger of the same hand operating the plunger by means of the pinion head. The opposite hand is left free to encourage the flow of blood or to place the part from which the blood is taken in the most favorable position. The advantages of this apparatus are:

1. Greater rapidity in filling pipettes with absolute accuracy because the suction is under delicate control and the graduations can be read at right angles instead of obliquely.

2. Avoidance of the insanitary method of passing the usual bone-tipped tube from mouth to mouth.

3. Greater ease and rapidity in cleaning pipettes after dilutions.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 DEARBORN AVENUE . . . . CHICAGO, ILL.

Cable Address . . . "Medic, Chicago"

Subscription price.....Five dollars per annum in advance

[For other information see second page following reading matter.]

SATURDAY, JUNE 13, 1908.

TYPHOID CARRIERS.

It is now generally recognized that a certain percentage of persons who have had typhoid fever continue to harbor the bacilli for varying periods of time after their recovery. The proportion of such "carriers" is put variously at from 1.7 per cent. up to 5 per cent. The length of time that this condition may last is at present a matter of speculation only. The most extreme case thus far reported is one of the Strassburg carriers, a woman who had had typhoid fever thirty years previously and still harbored typhoid bacilli. Such cases are known as chronic "carriers" to distinguish them from the acute "carriers" who show the presence of typhoid bacilli in the discharges for short periods of time only. The first very striking history of a chronic carrier was reported about two years ago by Kayser[1] of Strassburg. Here, as in most of the subsequent instances, there had been a series of strictly localized outbreaks of typhoid fever, which could not be accounted for in any of the ordinary ways. The infection was finally traced to a woman baker, who had had the disease ten years previously and whose discharges contained typhoid bacilli. Kayser reported another epidemic, which was due to infected milk, the carrier in this instance being engaged in the milk trade and causing infection of seventeen persons. Friedel's case was that of an insane woman, who prepared salads and vegetables for the other inmates of the asylum. She proved to be a typhoid carrier, although no history of an attack of the disease could be obtained. Probably the most brilliant case is Soper's woman cook, an account of whose devastations was published last year in THE JOURNAL.[2] This woman, during less than five years' time—the complete history could not be obtained—had caused outbreaks of typhoid fever in seven households, the number of cases aggregating twenty-six.

The most recent addition to the literature of the typhoid carrier is an article by Scheller,[3] recounting an investigation into the conditions on a large estate in Prussia, where typhoid fever had been endemic for fourteen years. During this time thirty-two cases of typhoid fever had occurred among the 180 persons living on the estate. By careful study of the conditions, the focus of infection was finally decided to be the dairy of the proprietor, practically all the victims having used milk from it. A woman employed in the dairy had suffered from typhoid fever seventeen years previously, and on examination typhoid bacilli were found in her stools in almost pure culture. At first it seemed inexplicable that the earliest cases traceable to her should have occurred fourteen years ago, three years after her illness, but an examination of the books showed that she entered on her dairy employment only fourteen years ago and it was then that she began to spread the infection. The number of cases that were traced to her, thirty-two, is the largest thus far credited to any single carrier.

There was a surprisingly large number of carriers found by Scheller, not less than eighteen among the forty persons who drank the milk of this dairy and only five of these had ever had typhoid fever. All, however, except the originator of the infection, proved to be only temporary carriers and yielded readily to treatment, while the latter continued to harbor bacilli even after rigorous measures had been employed. The great majority of carriers thus far reported have been women. It has been stated that this fact is in accord with the greater prevalence of gallstones among women. Still it must be remembered that women have exceptional opportunities for spreading the infection. All of the striking cases in the literature are cooks or cooks' helpers, bakers, dairy workers, etc., occupations involving the constant handling of substances which are excellent culture media for the typhoid bacillus. The real proportion between the sexes can be discovered only by the study of large numbers of cases.

In some instances it becomes a matter of clever detective work to discover a typhoid carrier. Thus Scheller tells of a tenement house in which cases of typhoid fever were continually appearing. The infection seemed to be connected with a woman living in the house and employed in a neighboring barracks. The woman herself was not a typhoid carrier, but careful search revealed the fact that a soldier working in the same room with her was one, and that the woman was in the habit of carrying away food from this room which she distributed at home. Later another soldier working in this same room developed typhoid fever.

There is probably nothing in the field of municipal sanitation which offers so difficult a problem as this. It is not only a question of ascertaining whether the urine and stools of each typhoid patient are free from bacilli at the time quarantine is removed. That alone would be difficult enough in private practice. But investigation has shown that the bacilli may disappear during convalescence only to reappear, in some instances, months later. Moreover, in these cases the number of bacilli excreted is enormously greater than that usually excreted at the height of the disease. It is admittedly difficult to isolate the typhoid bacillus from

1. Arb. a. d. k. Gandhtsamte, 1906; p. 173-176.
2. 1907, xlviii, 2019.
3. Centralbl. f. Bakteriol., 1908, No. 5, p. 385.

the stools during the disease, but the stools of typhoid carriers may contain very few organisms other than the typhoid bacillus, and the urine usually contains a pure culture. Obviously, then, we have not begun to solve the question of prophylaxis when we insist on disinfection of the discharges during the period of illness only. The matter becomes still more complicated through the discovery of typhoid carriers who have no history of ever having had the disease. Such persons probably harbor the bacilli only for short periods of time, yet during that time they are a menace to their neighbors. The evidence points to the probability that many who come into close contact with cases of typhoid fever become temporary carriers, but, having no symptoms of the disease, they take no precautions as to their discharges. Against such carriers no prophylactic measures can be taken. They will inevitably escape detection until an outbreak of typhoid fever in their environment leads to an examination of all possible sources of infection.

Perhaps the most important lesson to be learned from these investigations is the folly of neglecting municipal hygiene. A long protracted retribution awaits that city which has allowed typhoid fever to become endemic in its midst. Such a city as Pittsburg, for instance, must contain hosts of typhoid carriers, and these will doubtless continue to visit the sins of the fathers upon the children long after the city's water supply has been purified.

FADS IN MENTAL HEALING.

There are some people who pride themselves on being "cock-sure" of anything about which they have made up their minds; sound common sense is their strong point; they "know what's what;" they are not to be taken in. As a matter of fact, such persons are commonly among the most gullible of mortals. Lacking imagination, lacking idealism (and even proud of their defects in this regard), utterly lacking in sense of perspective and in capacity for broad and comprehensive views of things, they are impressed as easily as children by some vulgar and utterly unsubstantiated pretense of a cure of cancer or of caries; and most illogically (at the same time considering themselves to be nothing if not logical) they conclude that some popular cult—such as Eddyism—has better claim on the understanding than all science, from Hippocrates to Koch.

There is absolutely nothing new in the story. Not to go further back, Macaulay observed of Joanna Southcott, who was born in 1750: "We have seen an old woman with no talents beyond the cunning of a fortune teller, and with the education of a scullion, exalted into a prophetess and surrounded by tens of thousands of devoted followers, many of whom were, in station and in knowledge, immeasurably her superiors; and all this in the nineteenth century; and all this in London." Mesmer began by impressing the ignorant and the degraded; he ended by having for his disciples many among the aristocratic and the educated in the most brilliant and intellectual capital of Europe. Many thousands presented themselves as living proofs of his power to cure the gravest diseases. Yet there never has been from that time to this day proof of a single cure of a structural disease by his or any other merely psychic method. Perkinsism, spiritualism, theosophy, Dowieism and hundreds of similar movements are all in the same class. Evidently it is not sufficiently appreciated that knowledge and wisdom are by no means synonymous terms. Those who desire to pursue this subject further and to examine into the psychic processes by which such cults thrive are recommended to read Le Bon's book on "The Crowd; A Study of the Popular Mind." (The title in the original French is *La Foule;* not entirely unsuggestive!)

There died the other day, in New York, under most melancholy circumstances, Mr. William H. Marsh, who, while tenderly nursing a dog that had been bitten by a rabid cur, had contracted hydrophobia. It is well that a postmortem examination established beyond peradventure the fact that rabies was the disease of which this heroic man died. Thus was corroborated the diagnosis which the physicians had made during life. Nevertheless there were many who declared that the malady had in reality been pseudohydrophobia, and that the psychic state had been fostered by the physicians, whose unfavorable prognosis had precipitated the end, and that had the unfortunate patient denied the reality of the disease—had he but used sufficient will power—he would certainly have recovered. This aspect of the case has moved our esteemed lay contemporary, the New York *Evening Post,* to this editorial expression on "Will Power in Disease:"

"According to Mrs. Eddy, the source of all disease is in the patient's own fear. 'Disease is fear made manifest on the body,' a delusion which can be cured by a mental act, by 'agreeing to disagree with the approaching symptoms.' In other words, by a persistent effort of the will we can overcome illness, and death itself. There is some truth in this, and on the whole, if Christian Science has injured many devotees, it has perhaps done more good than harm, curing more than it has killed. While denouncing medicine and hygiene, it has done a useful service to both by calling general attention to the remarkable power of the mind over the body and the therapeutic value of the will."

One would think from this that no one ever before had heard of the influence of the will in disease. Yet what physician can practice his profession for twenty-four hours without recognizing the psychic factor and encouraging its exhibition by the sick? Not to go back to Boccaccio and Petrarch—and thus on through Paracelsus, Harvey, Johannes Mueller, Kant, Schopenhauer and hundreds of others—did not Dr. Tuke several dec-

ades ago write a standard work on "The Influence of the Mind on the Body"? Have such men as Myers, Braid, Charcot, Binet, Janet, Weir Mitchell not achieved things in this line by this very means, or are we only dreaming?

The foregoing quotation is from one of the ablest, one of the sanest (in general), one of the most influential of our great newspapers. Does it not admirably illustrate and support our assertion that only the element of time is necessary for the most intellectual agencies to be enlisted on the side of humbugs in general and of Mrs. Eddy in particular?

THE PRESIDENT-ELECT OF THE AMERICAN MEDICAL ASSOCIATION.

Two of the greatest recent triumphs of preventive medicine have been the freeing of Cuba from yellow fever and the rendering possible that Phœnix-like resurrection of the Panama Canal from the charnel house of dead efforts. Under these circumstances it was most natural that Colonel Gorgas, the chairman of the Section on Hygiene and Sanitary Science, the man to whom the first named public service was in the main, and the second entirely, due, should have been chosen president of the American Medical Association. In thus honoring Colonel Gorgas the Association has also honored not only itself, but the Medical Corps of the United States Army, the profession of medicine, and the government that was wise enough to recognize the fact that, all prejudice and precedent to the contrary notwithstanding, it is to the voice of the sanitarian that industrial and engineering enterprise must look for the axioms and postulates without which its theorems can not be effectively demonstrated or its problems solved. And if it be said that the American Medical Association itself exercised no little influence in the awakening that resulted in Colonel Gorgas' appointment as a member of the Canal Commission, thus placing him in a position in which his great work could become fully effective, surely that renders it the more natural and inevitable that the Association should bestow its highest honor on him. Colonel Gorgas was graduated in 1875 as A.B. by the University of the South, and in 1879 as M.D. by Bellevue Hospital Medical College, where he became a member of the house staff. He entered the Medical Corps of the United States Army in 1880 as first lieutenant, becoming captain in 1885, major in 1898, and colonel by special act of Congress in 1903 in recognition of his splendid work in ridding Havana of yellow fever. In 1903 the University of Pennsylvania conferred on him the honorary degree of doctor of science. His appointment as chief sanitary officer of the Isthmian Canal Zone, the work he did there in face of the most trying obstacles and insensate limitations, and his subsequent elevation to an authoritative position as a member of the commission, with the grand results to which the president himself has borne testimony, are matters of common knowledge. It can not fail that his scientific attainments and proved executive ability shall add fresh luster to the already illustrious office of president of the American Medical Association.

FOURTH OF JULY ACCIDENTS AND TETANUS.

This year, as usual, THE JOURNAL will publish statistics regarding accidents occurring in connection with the celebration of the Fourth of July, with special reference to the cases of tetanus which may result therefrom. A request is made, therefore, that full details be sent us of all cases of tetanus resulting from fireworks or other means of celebration, as well as of any accidents of special interest. Results in the use of tetanus antitoxin are particularly desired. It is hoped that a more extensive cooperation this year by physicians who have such cases will enable us to make these statistics more accurate and therefore more valuable.

THE CHICAGO SESSION.

The Fifty-ninth Annual Session of the American Medical Association, held last week in Chicago, has more than fulfilled all the expectations that were formed for it. It has demonstrated the increasing realization of the community of interest between the medical profession at large and the altruistic policy of professional betterment and uplifting for which the Association stands—no longer merely in academic theory, but in practical, statesman-like, effective effort. The session was certainly the most noteworthy of all that have been held. The registration of members reached the high mark of 6,446. The highest number previous to this was 4,722 at Boston in 1906. Last year at Atlantic City it was 3,713. The addresses, than which none better have been delivered, have already been commented on. The entertainments, which were eminently successful, were arranged to suit all tastes—receptions at the Fortnightly Club, the Chicago Woman's Club, at the Country Club by Mrs. Herbert Burrell, at the Art Institute, and an orchestral concert by the Theodore Thomas Orchestra, for the ladies; section and college banquets and reunions; trips to the packing houses and steel works for those interested in industrial enterprise; and finally the president's reception and ball on Wednesday night and a smoker on Thursday night, both at the Coliseum, which vast hall was on both occasions filled to overflowing. The section meetings were unusually well attended; the papers presented were of a high order, and the discussions thereon vigorous and well sustained. The scientific work of the Chicago Session leaves nothing to be desired. It is a matter for congratulation that the Section on Hygiene and Sanitary Science is arousing increasing attention. Hitherto the Cinderella among medical departments, a general awakening to the fact that preventive medicine will assuredly form the major part of the medicine of the future is now clearly in evidence. The business of the meeting was despatched by the House of Delegates with laudable promptitude and without the disturbance of harmony. The attendance of delegates was large throughout. More members registered for the first meeting than at any time since the reorganization. A noteworthy feature is a growing tendency to refer resolutions and other matters direct to special committees, deferring discussion thereon until the presentation of the committees' reports, thus avoiding the threshing out of a

subject twice over. One measure that deserves special mention was the endorsement by the House of Delegates of the report of the Board of Public Instruction, which recommended the institution of public lectures, signed articles by competent authorities on medical matters of public interest, in the lay press and magazines, etc. That this is a movement in accordance with the enlightened spirit of the age can not be doubted.

Medical News

ARKANSAS.

Commencement.—At the annual commencement exercises of the College of Physicians and Surgeons, Little Rock, held April 30, a class of 15 was graduated. The doctorate address was delivered by Rev. W. D. Buckner, Pine Bluff, and the faculty address by Dr. Arthur E. Sweatland, and the degrees were conferred by the dean.

Society Meeting.—At the annual meeting of the Carroll County Medical Society, held in Berryville, May 5, the following officers were elected: President, Dr. Henry Pace, Eureka Springs; vice-president, Dr. Isaac M. Poyner, Berryville; secretary, Dr. V. F. Lassagne; treasurer, Dr. John D. Jordan, Eureka Springs, and delegates to the state medical society, Drs. Russell G. Floyd and Henry Pace, both of Eureka Springs.

CONNECTICUT.

Tablet for Anesthetist.—The tablet in honor of Dr. Horace Wells, pioneer in anesthesia, sent from Madrid by the Odontological Society, has reached Hartford. The memorial is composed of silver plate, surrounded by wreaths of white metal, showing laurel leaves on one side and oak on the other. The plate is 33 by 24 inches and bears the following inscription: "The Spanish Odontological Association to Horace Wells, Jan. 14, 1907."

State Society Meeting.—At the one hundred and sixteenth meeting of the Connecticut State Medical Society, held in New Haven, May 27 and 28, the following officers were elected: President, Dr. Seldom B. Overlock, Pomfret; vice-presidents, Drs. Irving L. Hamant, Norfolk, and Walter L. Barber, Waterbury; secretary, Dr. Walter R. Steiner, Hartford (re-elected); treasurer, Dr. Joseph H. Townsend, New Haven; and delegate to the American Medical Association, Dr. Everett J. McKnight, Hartford.

DISTRICT OF COLUMBIA.

Commencement Exercises.—The annual commencement exercises of Howard University were held in the First Congregational Church, Washington, May 27.

Establish Research Fellowship.—The class of 1908 of the Department of Medicine of Georgetown University, numbering 45, which was graduated on June 3, announces to the university authorities that it will establish a class research fellowship to be known as "Class of '08 Fellowship," with an annual fund for its support of not less than $300.

FLORIDA.

Society Meeting.—At the annual meeting of Citrus County Medical Society the following officers were elected: President, Dr. James F. Miller, Inverness; vice-president, Dr. Joseph D. Bennett, Crystal River; secretary-treasurer, Dr. George A. Dame, Inverness; and delegate to state society, Dr. B. H. Maynard, Floral City.

Vital Statistics.—During April the records of the Jacksonville board of health show there had been 49 births reported, 13 of which were white and 36 colored. The number of deaths during the month were 81, of which 28 were white and 52 colored individuals. Of these deaths 72 were due to natural causes. During the month 5 white men and 9 colored men died from consumption.

ILLINOIS.

Smallpox.—Smallpox in mild type is reported in and around Marston.——Joliet reports 3 cases.——State Inspector Crawford has found 22 cases in Elgin and has ordered all employés of the watch factory to show certificates of vaccination or be vaccinated.——Seven cases of smallpox in one family at Alexander are reported; 6 cases in another family, and 2 in another in Whiteside Township, Marshall County.

Personal.—Dr. Robert C. Bourland has been appointed major surgeon of the Third Infantry, Ill. N. G., vice Major Carleton E. Starrett, deceased, subject to the report of the examining board.——Dr. Michael W. Kelley, Joliet, is in St. Joseph's Hospital seriously ill with paralysis, due to a spinal injury. ——Ira Ganstang, a senior student of the Medical Department of the University of Illinois, died from throat disease, May 7, in Chicago.——Dr. John A. Koch, Quincy, has been appointed a delegate from Illinois to the International Congress on Tuberculosis.

Chicago.

X-Ray Burns.—Damages of $10,000 are said to have been awarded John Bortoli against the Lakeside Hospital, May 28, for burns suffered while submitting to *x*-ray treatment.

Graduating Exercises.—At the annual commencement exercises of the College of Physicians and Surgeons, held June 9, Dr. Rudolph Matas, New Orleans, delivered the doctorate address.

Hospital for South Chicago.—At a recent meeting of the South Chicago Hospital Association, the president was authorized to advertise for bids for the construction of a building at Ninety-second Place and Luella Avenue, to cost $40,000.

Communicable Diseases.—A total of 491 cases of communicable diseases was reported to the bureau of contagious diseases during the week ended June 6. Of these 269 were measles, 63 scarlet fever, 61 diphtheria, 36 chickenpox, 21 tuberculosis, 20 whooping cough, 16 typhoid fever, 1 smallpox, and 4 diseases of minor importance.

Unlicensed Practitioner Fined.—Phillopena Schmidt is said to have been fined $100 and costs June 4, by Municipal Judge Scovel for practicing medicine without a license. She is said to have been found guilty of a similar charge a year ago and to have been fined the same amount.——Anna Hiavacek and her daughter, Anna Paviovic, are said each to have been fined $100 and costs by Judge Scovel, on the charge of practicing medicine without a license, May 20.

Deaths of the Week.—During the week ended June 6 there were 483 deaths reported from all causes, equivalent to an annual death rate of 11.63 per 1,000. The deaths numbered 95 fewer than for the previous week and 91 fewer than for the corresponding week of 1907. With the exception of violence and influenza, all the important causes show a decrease during the week. Deaths from pneumonia, acute diseases and tuberculosis were also lower than during the corresponding week of 1907.

KENTUCKY.

Personal.—Dr. W. W. Ranshaw has succeeded Dr. L. E. Brinker as health officer of Covington.——Dr. Oscar C. Dilly has been appointed president of the Louisville State Hospital, vice Dr. Jouett Menefee. Dr. Menefee sailed from New York for Europe, June 1.

Officers Elected.—At the annual meeting of the Southwestern Kentucky Medical Society in Paducah, May 12-13, the following officers were elected: President, Dr. Vernon Blythe, Paducah; vice-presidents, Drs. H. T. Crouch, Bardwell, and Robert Overbey, Birmingham; secretary, Dr. C. E. Purcell, Paducah; treasurer, Dr. Charles H. Brothers, Paducah; historian, Dr. Robert T. Hocker, Arlington.——The fourth annual meeting of the Kentucky State Association of Railway Surgeons was held in Louisville, May 12-13. The following officers were elected: President, Dr. Cuthbert Thompson, Louisville; vice-presidents, Drs. J. L. Phythian, Newport, H. P. Cartwright, Bowling Green, and H. S. Chase, Junction City; secretary, Dr. J. B. Kinnaird, Lancaster; treasurer, Dr. Clarence H. Vaught, Richmond.——At the annual meeting of the State Medical Association of Colored Physicians, held in Louisville, May 14, the following officers were elected: President, Dr. P. D. Robinson, Lexington (re-elected); vice-president, Dr. E. D. Whedbee, Louisville; secretary, Dr. B. F. Jones, Danville; treasurer, Dr. C. N. Harris, Mount Sterling.

MARYLAND.

Personal.—Dr. Foutz, Westminster, has been appointed health officer of Carroll.

Smallpox in Suburbs.—Five additional cases of smallpox have been discovered near Patasco, in the suburbs of Baltimore, making 12 cases in all.——On May 27, 6 cases of smallpox were discovered in the vicinity of Baltimore. Two of the

patients were quarantined in the house and the other four were sent to the Isolation Hospital.

Found Guilty.—Drs. W. Curby, Burkhard, and A. Newton Sibert, are said to have pleaded guilty, May 6, in the United States District Court for using the mails for sale of illegal medicines. The former was sentenced to 13 months in the Atlanta penitentiary and the latter, the manager, was sentenced to three months in jail.——Max Parel, Baltimore, is said to have been fined $250 in the District Court May 27, having pleaded guilty of using the mail for advertisement of illegal medicine.

Personal.—Dr. Poutz, Westminster, has been appointed health officer of Carroll county.——Dr. S. O. Mast has been appointed associate professor of Biology in the Woman's College of Baltimore.——Dr. W. E. Burge has been appointed fellow in physiology, Dr. E. C. Dickson fellow in pathology, and Dr. A. Schaeffer fellow in biology in Johns Hopkins University.——Dr. Frederick H. Baetjer, *x*-ray expert of Baltimore was obliged to have his eye enucleated June 1.——Dr. Ralph Duffy has been made medical superintendent of Franklin Square Hospital, Baltimore.

Commencements.—The annual commencement of the University of Maryland was held June 1. The graduates of the department of medicine numbered 73. The university gold medal was awarded Dr. David Franklin and certificates of honor were given to Drs. William M. Hollyday, Solomon S. Cherry, Lawrence Kolb, Henry L. Sinskey, and Louis H. Seth. ——Maryland Medical College graduated a class of 20, June 2. Dr. Marcus S. Dillon of West Virginia carried off chief honors. Dr. Henry B. Kolb, Baltimore; J. R. Armstead, Alabama; and F. A. Neegaard, Tennessee, received honorable mention.——At the College of Physicians and Surgeons, a class of 68 was graduated, Dr. William H. Thearle of Maryland receiving the highest honors and a gold medal.——The twenty-sixth annual commencement exercises of the Woman's Medical College were held May 28, when a class of 11 was graduated. The doctorate address was delivered by Dr. John C. Hemmeter.

MASSACHUSETTS.

New Hospital.—Drs. Albert C. Lane, Seth W. Kelley and William H. Keleher are the medical members of the incorporators of Woburn Hospital.

Decides Not to Change Name.—At the meeting of the Massachusetts Association of Boards of Health, April 30, a proposed amendment to the constitution to change the name to Massachusetts Public Health Association, was lost.

Against Tuberculosis.—At a meeting recently held in Pittsfield a local anti-tuberculosis society was organized. Dr. James F. A. Adams was elected president; Dr. Henry Colt, secretary; Dr. Frederick S. Coolidge, treasurer; and Alfreda B. Withington and R. Allen Woodruff, medical members of the executive committee.——At the meeting for organization of the Waltham Anti-Tuberculosis Association, Dr. Arthur D. Draper was elected secretary.

Personal.—Drs. Walter D. Riordan, John J. Sullivan, Joseph F. Walch, Bernard L. Mulholland, Thomas H. Redmond and Patrick J. Hughes have been re-elected ward physicians of Lawrence.——Dr. and Mrs. Leander M. Crosby, Wakefield, sail for Europe July 10.——Dr. Lewis Bates, Weymouth, has sailed for Panama.——Dr. Henry N. Longfellow, Boston, has returned from an extended trip to the Pacific Coast.——Dr. John H. Bannon, Lawrence, will soon leave for a two months' tour of English hospitals.

MICHIGAN.

Commencement.—The fortieth annual commencement exercises of the Detroit College of Medicine were held May 28. During the week preceding graduation, alumni clinics were held by eminent specialists.

Smallpox.—Three cases of smallpox have been discovered in Atlantic.——Smallpox is reported to be epidemic and spreading in Jackson. The isolation hospital is filled and tents have been put up for other patients.——At present about ten cases are in the Calumet Detention Hospital.

Personal.—Dr. W. A. Colton has been appointed health commissioner of Escanaba and Dr. James O. Johnson, health officer of Adrian.——The house of Dr. Henry C. Judson, Detroit, was damaged to the extent of $400 by fire, May 29.——Dr. William H. Veenboer has resigned as city bacteriologist of Grand Rapids.——Dr. Eben D. Kanaga, Charlevoix, has been appointed assistant physician at the Michigan Hospital for the Insane, Kalamazoo.——Dr. Johnson B. Kennedy has been elected vice-president of the Detroit Board of Health.

NEW JERSEY.

To Build Hospital.—At the meeting of the Board of Freeholders, June 4, it was decided to build a new hospital at New Lisbon. The plans of the new structure are simliar to those of the county insane hospital. The building will be two stories in height, will accommodate 36 patients, and will cost $12,000.

State Society Meeting.—The one hundred and forty-second annual meeting of the Medical Society of New Jersey will be held at Cape May City, June 18-20, under the presidency of Dr. Edward J. Ill, Newark. The society is to be tendered a banquet by the management of the Hotel Cape May, followed by a vaudeville entertainment. Dr. Stephen Pierson, Morristown, will respond to the toast of "The General Practitioner;" Dr. Hobart A. Hare, Philadelphia, "The Medical Man as a Teacher," and Hon. Joseph S. Frelinghuysen, Raritan, to "The Doctor as a Politician."

NEW YORK.

Ward Bill Signed.—This measure, which authorizes magistrates in New York City to order the arrest of persons who are complained of as being insane, and giving them power to order the insane persons to be committed to the insane department at Bellevue Hospital, until examination, has been signed by Governor Hughes.

Milk Producers' Difficulties.—The Board of Health of New York City has ordered that all persons who milk cows must wear white duck trousers and jackets, or else that the milk will not be admitted to the city. Much of the milking in the vicinity of Middletown has been done by the wives and daughters of the farmers who refuse to don the prescribed garb. The problem is thus far unsolved.

New York City.

Summer Hospital Open.—The Seaside Hospital at Newdorp S. I. was opened on June 1 by St. John's Guild. Patients will be taken to the hospital daily until the Floating Hospital begins its trips about July 1.

Personal.—Dr. and Mrs. Charles H. Chetwood sailed for Europe June 6 and Dr. and Mrs. L. Emmett Holt, June 3.—— Dr. Mary Merritt Crawford, who has been an interne in the Williamsburg Hospital, has become an ambulance surgeon for this same hospital. This is the first time Brooklyn has had a woman on the ambulance service.

Stray Dogs to Be Killed.—There are said to be 150,000 stray dogs in New York City which the Health Department will begin to kill in a systematic way, as it believes that the danger from hydrophobia will thus be lessened. The work will be extended to every part of the city. Dr. Darlington believes that if the ordinances in regard to stray dogs were enforced, rabies would soon become extinct.

Dinner to Foreign Guests.—The Otologic Section of the New York Academy of Medicine gave a dinner on May 25, in honor of Arthur H. Cheatle, F.B.C.S., professor in King's College Hospital, London, and Dr. Albert Jansen of Berlin. Among the speakers were Professor Cheatle, Dr. Charles J. Kipp, Newark; Dr. Jansen, Dr. Walter B. Janes, Dr. John Winters Brannan, Dr. H. S. Birkett, Montreal, and Dr. Holbrook Curtis.

Hospital Real Estate Taxable.—Roosevelt Hospital and all similar institutions must pay taxes on all property that they own which is not devoted solely to the general purposes of the institution according to decision just rendered by the Supreme Court. This decision was the result of the assessment of a tenement belonging to Roosevelt Hospital, which the trustees thought ought to be exempt from taxation because the income was used for hospital purposes and because under the charter granted the hospital, it was exempt from taxation. A tax law has since been passed revoking all special exemptions and holding that only such property as was actually used for hospital or similar charitable purposes should be exempt.

Hospital for Rockefeller Institute.—A gift of $500,000 has been made to the Rockefeller Institute for Medical Research by D. J. Rockefeller, for the purpose of erecting and equipping a hospital which is to adjoin the present building. The building, though small when compared with many others in the city, has been designed with a view of studying the nature and treatment of individual cases of disease with a thoroughness not now possible in other places. This hospital will contain elaborate provisions for the fresh-air treatment of patients, by balconies and roof gardens. The purpose of the hospital will not be to provide accommodation for many, but to develop new and more exact methods of treatment which may be applied elsewhere on a larger scale.

PENNSYLVANIA.

Philadelphia.

Everhart Museum Dedicated.—The Everhart Museum of Science and Natural History, a gift of Dr. Isaiah F. Everhart, was dedicated and presented to the city of Scranton with fitting ceremonies, May 30. Dr. Everhart also endowed the institution with a fund of $101,000. Dr. Everhart was presented with an embossed copy of the resolutions of thanks and appreciation from the citizens of Scranton.

Medical Alumni Clinics.—The annual meeting of the Alumni Association of the University of Pennsylvania will be held at the University, June 16. Starting at 9 a. m., a series of clinics will be given throughout the day in the different departments of the institution. The clinics will be held both morning and afternoon in the hospital and medical laboratories. Luncheon will be served at 1 o'clock in Houston Hall at which Dr. J. William White will deliver an address of welcome.

Personal.—The honorary degree of D.Sc. will be conferred on Dr. Henry C. Chapman, professor of institutes of medicine and medical jurisprudence at Jefferson Medical College, by the University of Pennsylvania at the annual commencement, June 17.——Dr. George M. Boyd sails for Europe June 13.——Dr. W. M. Bridgett, who has been seriously ill with typhoid fever, is recovering.——Dr. Walter E. Weyl has returned from Italy.——Dr. J. Victor Wilson sailed for Europe, June 4.——Dr. Matthew Woods lectured last week at the New Century Club on "Hobbies" for the benefit of "The Clinic for the Home Treatment of Chest and Throat Diseases."——Dr. Alfred Gordon has been placed in charge of the Out-Patient Department of nervous and mental diseases of the Northwestern General Hospital.

Health Report.—The total number of deaths reported for the week ended June 6 aggregated 441, including 237 males and 204 females. This is a decrease of 33 from the number reported last week and 41 less than those reported in the corresponding period of 1907.——The principal causes of death were: Typhoid fever, 3; measles, 6; scarlet fever, 5; whooping cough, 6; diphtheria, 7; consumption, 65; cancer, 20; diabetes, 4; apoplexy, 11; paralysis, 5; heart disease, 46; acute respiratory disease, 42; enteritis, 21; appendicitis, 5; Bright's disease, 33; puerperal septicemia, 7; premature birth, 14; congenital debility, 9; old age 3; suicide, 6; accidents, 11, and marasmus, 1. There were 143 cases of contagious disease reported with 15 deaths, as compared with 134 cases and 12 deaths reported in the preceding week.

Commencements.—The eighty-sixth annual commencement of Jefferson Medical College was held in the Academy of Music, June 8, when a class of 169 from all parts of the world was graduated. The diplomas were conferred by the Hon. William Potter, president of the Board of Trustees, and the annual address to the graduating class was delivered by Dr. Ira Remsen, president of Johns Hopkins University.——The annual commencement exercises of the Medico-Chirurgical College of Philadelphia were held in the Academy of Music, June 6. A class of 67 was graduated. The degrees were conferred by Hon. Henry F. Walton, and the doctorate oration was delivered by Prof. Judson Perry Welsh, vice-president of Pennsylvania State College.——The annual commencement exercises of the Temple University were held in the Academy of Music, June 3 when 8 men were presented for the degree in medicine. Dr. Elmer E. Brown, vice-president of the university, conferred the degrees and the annual oration was delivered by Hon. Hampton L. Carson.

GENERAL.

Order Section Transactions.—Those who desire copies of the 1908 Transactions of any of the sections should order them at once as printing is about to commence. Only enough are printed to supply the demand, and each year some persons order too late to be supplied. It is to be remembered that one may give a permanent order for Transactions—that is, his name is put on the list and the Transactions of the sections specified are sent, from year to year, until the order is canceled. Address orders to the American Medical Association, 103 Dearborn Avenue, Chicago.

Coming Meetings.—The National Medical Association, composed of negro physicians, pharmacists and dentists, organized in 1898 in Atlanta, Ga., will hold its tenth annual meeting in New York City, August 25 to 27. The association is the parent body of numerous state and local societies. An attendance of 500 is expected. Dr. Peter A. Johnson is chairman, and Charles H. Roberts, D.D.S., secretary, of the local committee.——The one hundred and tenth annual conference of the American Hospital Association will be held in Toronto, Ont., September 22 to 25. The association now has a total membership of 400 and the meeting will be presided over by Dr. Sigismund S. Goldwater of Mount Sinai Hospital, New York City.

Personal.—Col. William C. Gorgas, Medical Corps, U. S. Army, chief sanitary officer Isthmian Canal Commission, has been appointed delegate to the American Sanitary Congress, to be held in Santiago, Chile, in December.——The following appointments have been made to the staff of the Rockefeller Institute for Medical Research: P. A. Lewis, assistant in pathology; A. I. Kendall, assistant in bacteriology; A. R. Dochez, fellow in pathology, and A. O. Shaklee, fellow in physiology and pharmacology. The following promotions have been made: John Auer, associate in physiology and pharmacology; Don R. Joseph, assistant in physiology and pharmacology; Alexis Carrel, associate in surgery; J. W. Jobling, associate in pathology; Benjamin T. Terry, assistant in protozoology; Donald D. Van Slyke, assistant in biologic chemistry; Walter A. Jacobs, assistant in biologic chemistry; Bertha I. Barker, fellow in pathology, and R. V. Lamar, fellow in pathology.

Society Meetings.—At the twenty-second annual meeting of the American Orthopedic Association, held in Chicago, June 4 to 6, the following officers were elected: President, Dr. Ansel G. Cook, Hartford, Conn.; vice-presidents, Drs. Albert H. Freiberg, Cincinnati, and Augustus Thorndike, Boston; secretary, Dr. Robert B. Osgood, Boston; treasurer, Dr. Gwillym G. Davis, Philadelphia; executive committee, the president, secretary and Drs. John Ridlon, Chicago; Robert W. Lovett, Boston, and Reginald H. Sayre, New York City; delegate to the Congress of American Physicians and Surgeons, Dr. Virgil P. Gibney, New York City, and alternate, Dr. H. Augustus Wilson, Philadelphia.——At the annual meeting of the Association of Surgeons of the Southern Railway and Allied Lines, held in Birmingham, Ala., the following officers were elected: President, Dr. Benjamin G. Copeland, Birmingham; vice-presidents, Drs. Henry T. Bahnson, Winston-Salem, N. C., and James H. Shorter, Macon, Ga.; secretary-treasurer, Dr. Jacob U. Ray, Woodstock, Ala., and member of the executive committee, Dr. S. Rush Miller, Knoxville, Tenn.——At the annual meeting of the National Association for the Study and Prevention of Tuberculosis, held in Chicago, June 5 and 6, the following officers were elected: President, Dr. Vincent Y. Bowditch, Boston; honorary vice-presidents, the President of the United States, Hon. Grover Cleveland and Dr. William Osler, Oxford, England; vice-presidents, Homer Folks, New York City, and Dr. Charles L. Minor, Asheville, N. C.; treasurer, Brig.-Gen. George M. Sternberg, Medical Corps, U. S. Army, retired, Washington, D. C.; secretary, Dr. Henry Barton Jacobs, Baltimore; executive secretary, Livingston Farrand, New York City; and directors, Drs. John N. Hurty, Indianapolis; S. Adolphus Knopf, New York City; Victor C. Vaughan, Ann Arbor, Mich.; Edward R. Baldwin, Saranac Lake, N. Y.; Rudolph Matas, New Orleans, and Messrs. James J. Hill, St. Paul; Frederick Redfield Proctor, Proctor, Vt.; J. B. Bixby, St. Louis; C. B. Boothe, Los Angeles, and A. B. Cummins, governor of Iowa.

Army Medical Department Examinations.—The act of April 23, 1908, reorganizing the Medical Corps of the Army, gives an increase in that corps of six colonels, twelve lieutenant-colonels, forty-five majors and sixty captains or first lieutenants, and establishes a medical reserve corps as an adjunct to the medical corps. Under this recent act, the lieutenants of the medical corps are promoted to captain after three years' service instead of five, and the increase in the higher grades insures promotion at a reasonable rate all through an officer's military career. Furthermore, applicants who are found qualified in the preliminary examination are appointed first lieutenants of the medical reserve corps and ordered to the Army Medical School in Washington, D. C., for eight months' instruction. Full information concerning the medical corps and the medical reserve corps may be procured on application to the Surgeon General, U. S. Army, Washington, D. C.

THE MEDICAL CORPS.

Preliminary examination for appointment in the medical corps will be held on Aug. 3, 1908, and formal applications should be in possession of the War Department prior to July 1. The applicant must be a citizen of the United States, between 22 and 30 years of age, a graduate of a medical school legally authorized to confer the degree of doctor of medicine, of good moral character and habits, and must have had at least one year's hospital training or its equivalent in practice. The examination will be held concurrently throughout the country

at points where boards can conveniently be assembled, and due consideration will be given to the localities from which applications are received, in order to lessen the traveling expenses of applicants as much as possible. The examination in subjects of general preliminary education may be omitted in the case of applicants holding diplomas from reputable literary or scientific colleges, normal schools or high schools, or graduates of medical schools which require an entrance examination satisfactory to the faculty of the Army Medical School. The large number of vacancies created in the medical corps by recent legislation makes it certain that all successful candidates will be recommended for a commission for several years to come.

THE MEDICAL RESERVE CORPS.

It is desired to obtain and maintain a list of qualified medical men all over the country who are willing to serve as medical officers in time of emergency, and to such men the President is authorized to issue commissions as first lieutenants, medical reserve corps. It is recognized that it will be necessary to place only a limited number of these officers on the active list in time of peace, and it is hoped that young medical men throughout the country and medical officers of the militia of the various states may be sufficiently interested to secure positions on the medical reserve corps list. An applicant must be between 22 and 45 years of age, a citizen of the United States, a graduate of a reputable medical school legally authorized to confer the degree of doctor of medicine, and must have qualified to practice medicine in the state in which he resides. Examinations will be held in the near future and will embrace the practical medical subjects.

CANADA.

Ontario Medical Association.—From the standpoint of attendance and scientific work done, the meeting of the Ontario Medical Association at Hamilton, May 26-28, was the best ever held. The number actually registered was 317. The address in medicine was delivered by Dr. Charles G. Stockton, Buffalo, and the address in surgery by Dr. Charles L. Scudder, Boston. The association adopted a resolution expressing its hearty approval of the proposed establishment of psychiatric clinics by the Ontario government in connection with the hospitals for the insane in the province. It also will request the government of the province to appoint a commission in lunacy or a board of alienists who alone shall give expert evidence in courts of law as to sanity or insanity. Still another resolution called on the government to institute reforms in the hospitals for the insane service, looking toward appointments and promotions on the basis of merit rather than for political activity, and that a superintendent should not be appointed to any of these institutions unless he has had some years of training in the service. The association condemned in the strongest possible terms criminal practices. The following officers were elected: Dr. Herbert J. Hamilton, Toronto, was elected president; Drs. Robert R. Wallace, Hamilton; Alexander N. McFaul, Collingwood; A. Dalton Smith, Mitchell, and George H. Field, Coburg, vice-presidents; Dr. E. Stanley Ryerson, Toronto, general secretary; Dr. James E. Davey, Hamilton, assistant secretary; and Dr. James H. Mullin, Hamilton, treasurer. Dr. Thomas G. Roddick was present, and at the annual banquet entered a strong plea for interprovincial registration and voiced his opinion that as soon as Ontario took decided ground and urged the measure, the other provinces would promptly fall in line. The meeting was held under the presidency of Dr. Ingersoll Olmsted, Hamilton.

FOREIGN.

Anglo-American Information Bureau at Berlin.—The Anglo-American Medical Association has opened an information bureau at *Friedrichstrasse* 105, Berlin.

Chair of American Antiquities at Paris.—The course of lectures on American Antiquities at the Collège de France has been entrusted to a physician, Dr. Capitan, who has made a special study of prehistoric lore for which he has found time in his busy professional career. This chair was founded recently by the duc de Loubat.

Appendicitis in Prussia.—The number of cases of appendicitis treated in the public hospitals of Prussia is said to have increased from 8,412 in 1903 to 16,781 in 1906. The mortality has dropped from 9.46 to 6.68 per cent. The mortality is the highest between the ages of 10 and 25. One exchange states that more persons have died at this age from appendicitis than from all other diseases combined.

Plague in Ecuador.—Minister Fox of Quito reports that in order to prevent the spread of plague from Guayaquil into the interior of Ecuador all traffic has been suspended on the railroad between Huigra and Alausi. The former place is the headquarters of the railroad and the hospital. Patients discovered on trains are put off at this point, and on this account more cases are reported from there than any other place except the port of Guayaquil. Orders have been issued to burn all houses in Huigra found to be infected and a sanitary cordon has been established between Huigra and Alausi and all communication between these points has been transiently suspended.

First International Congress of Urology.—This congress will open at Paris, Sept. 30, 1908, with Professor Albarran presiding. The following four questions will be discussed: "Pathogenesis and Treatment of Anuria," presented by Kümmel, Hamburg; Watson, Boston, and Achard, Paris; "Retention of Urine without Mechanical Obstacle," presented by Frankl-Hochwart, Vienna; Albarran, Paris; d'Hoenens, Brussels; "Normal Physiology and Pathology of the Prostate," presented by Posner, Berlin; Pardoe, London, and Haberern, Budapest; "Operative Indications in Tuberculosis of the Kidney," presented by Ceccherelli, Parma; Brongersma, Amsterdam; Guisy, Athens, and Heresco, Bucharest. The discussions will be restricted to these subjects.

Foreign Medical Students in France.—Out of the total 7,538 medical students in France, 819 come from foreign countries; more than half are from Russia, and a large proportion from the countries around the Mediterranean. Only 3 are from the United States, 13 from Germany and 6 from Great Britain. The totals of both native and foreign students have considerably increased this last year. The *Semaine Médicale*, May 20, pleads for more favorable conditions for admittance of foreign pupils to the French medical courses, so as to attract larger numbers. The crowd now passes on to Germany and Austria, where special facilities are provided for postgraduate courses, besides the regular courses. A recent writer explains this as due to the fact that east of the Rhine medicine is more of a science, while in France, on the other hand, it is regarded more as an art.

Second Spanish Surgical Congress.—This congress was held at Madrid, in May, Professor Cortejarena in the chair. Ribera discussed surgery of the stomach and hydatid cysts. For the latter he operated in 117 cases, 60 men and 57 women, the youngest patient 3 and the oldest 79 years old. In two cases the cyst was in the lung and was diagnosed by the bulging of one side of the chest and dyspnea on exertion, with good general health. He differentiates hydatid cyst in the liver when the tumor is not accompanied by functional derangement, especially of the biliary passages. In his numerous cases of this affection in the liver jaundice was not observed in any instance, merely a slight tendency in one or two patients. He prefers the marsupialization technic and warns against neglecting to seek for other lesions in the liver when a hydatid cyst is encountered. Failure to do this was responsible for one death in his experience, an abscess on the other side of the liver escaping detection.

Alleged "Meat Juice" Preparations.—As already mentioned, a widely advertised German "meat juice" preparation was recently written up in the medical journals as not containing any meat juice, tests showing that it was merely a meat extract with egg albumin. Some of the smaller medical journals are still carrying the advertisement affirming it to be meat juice; they have announced that when their contracts expire they will not renew them. The *Münch. med. Wchnschr.*, however, publishes a lawyer's opinion which shows that the German law does not compel the fulfilling of an advertising contract when it was accepted in ignorance of the incorrectness of the statements in the advertisement. At Hamburg the authorities have confiscated a large amount of the "meat juice" preparation in question. The Munich courts have also taken up the matter, and are considering the authorship of the write-ups which have appeared during the last few years in the medical and lay press. The fraudulent composition of the preparation escaped discovery by chemical and other tests until the new biologic precipitin test was worked out. This is another example of the practical importance of pure laboratory research—differentiation of albumin from different species having first become possible by the new precipitin biologic reactions. The proprietors admit now that the term "meat juice" was a misnomer. Meat juice and meat albumin, they say, will not keep, and meat extract and egg albumin have to be used in such preparations.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Eczema in Infants and Young Children.

Dr. James N. Winfield, Brooklyn, in the *New York Medical Journal*, March 21, 1908, gives a splendid review of some of the causes of this troublesome condition, and offers some good advice as to its treatment. He estimates that eczema constitutes about one-third of all the skin diseases treated in the dermatologic clinics of the world. It "is a catarrhal dermatitis" which, according to the length of time it has endured, may be termed acute, subacute or chronic. The acute or subacute form, the most frequent in infants, is attended with more or less heat, redness and swelling, while thickening of the skin only occurs when the disease becomes more chronic. This disease of the skin may be divided into "the erythematous, the papulovesicular, pustular and squamous."

The erythematous form is mild; the skin is usually dry, and it "is often described under the name of pityriasis." The papular variety occurs in children, while the vesicular form is the most typical of this disease in infants, and generally occurs on the face. In this vesicular form the duration of the vesical is usually short and has ruptured, leaving a red, moist surface, when the physician first sees the patient. The skin in infants may show considerable inflammation with a good deal of redness, which constitutes "the infantile eczema rubrum." If these broken vesicles become infected with pus organisms, then pustular eczema occurs, with a purulent discharge and intermixed with brownish crusts or scabs. Squamous eczema may follow any of these types, and really represents an attempt at resolution.

Winfield considers the cause of eczema in the young to be either "external irritants or reflexes from the gastrointestinal tract." Therefore, the diet is an important element in the cause of eczema in infants and young children, and overfeeding is as frequent a cause as the kind of food given. If a teething child has also digestive disturbances, he may develop an eczema, though the teething may not be the direct cause. Intestinal parasites may cause eczema, and Winfield thinks that various reflexes may cause it, such as a tight foreskin or adhesions of the clitoris.

Among the external causes are animal parasites, improper clothing, as too much rough woolen next the skin; too tight or improperly arranged binders, etc., or irritating dyestuffs in the clothing. An abnormally dry skin may be the cause of eczema.

Winfield divides the treatment of the disease into two parts: "1, The care of the child, and, 2, the treatment of the disease proper."

A child with eczema should be clothed as lightly as possible, and flannel underclothing should be avoided. The weight and the warmth of the clothing should be just sufficient to protect the child and not enough to cause much perspiration, or so badly arranged as to cause chafing.

Theoretically water for bathing should be avoided and some bland oil, such as olive oil or almond oil, substituted. But as it is impossible properly to remove the crusts from the eczematous patches, or to remove the normal secretions of the body without water, practically a fine soap and soft water must be used. If rain water or soft water can not be obtained, bran may be added to the bath, and also sodium bicarbonate. The child having been thoroughly dried after his bath, or the part bathed having been thoroughly dried, he should be well rubbed with almond oil or a pure, fresh cold cream. While such bathing should not be done too frequently, still a properly carried out general bath once every third day, or more frequently if needed, is not so irritant to eczema as is supposed. If deemed advisable, the skin may be powdered after bathing, and Winfield says preferably with a mineral dusting powder, because the vegetable powders such as lycopodium, rice powder or starch take up the secretions, become rancid, and readily serve as culture media. A fine talcum powder may be used, or the oxid or stearate of zinc, with or without bismuth. An infant with eczema should not be held too much, or allowed to become overheated or excited.

Eczema more frequently occurs in children who are improperly cared for, and in those who are fed on artificial foods than in those who are fed with mother's milk or modified cow's milk. In other words, the artificial foods usually contain too much starch. Older children who are allowed to eat too many crackers or much candy are likely to develop the same condition.

It should not be forgotten how much water infants and young children need. This simple necessity is often neglected.

Winfield says that after a child has cut its teeth, "milk should still constitute the bulk of its diet, with the addition of beef juice, cream, dry bread and zwieback," and if there is constipation or lack of nutrition, a little olive oil. Orange juice and baked apple may also be added at times with advantage.

When constipation is present, as it generally is in eczematous children, and olive oil or milk of magnesium is not sufficient to relieve it, a small dose of calomel may be given occasionally, or castor oil or rhubarb. But if a stronger drug than magnesium must be given continuously, a preparation of cascara sagrada is the best. Winfield has found malt sugar of advantage in the constipation of infants. Care should be taken, whatever laxative is used, not to cause excessive action and deplete the child, or cause intestinal irritation, as not only will the nutrition of the child be impaired, but the eczema will not be benefited and may be made worse.

The most troublesome symptom of eczema is the itching, and this, fortunately, is generally relieved by proper external applications. If not, Winfield suggests small doses of bromid or chloral, but this seems inadvisable unless in very exceptional instances. He condemns the administration of arsenic in infantile eczema, and in this we certainly concur.

The external treatment is protective, and nothing should be applied to the skin that will irritate it. The scales and crusts should be first removed after softening with olive or almond oil, or with soap and warm water if necessary. Scales and scabs that can not readily be removed should not be torn off, but should be gradually macerated with the oil. Resorcin or phenol may be added to the oil as follows:

℞.	gm. or c.c.		
Resorcini	60	or	gr. ix
Olei amygdalæ expressi	100		fl℥iv

M. et Sig.: Use externally as directed.

Or:

℞.	gm. or c.c.		
Phenolis	50	or	gr. viii
Olei olivæ	100		fl℥iv

M. et Sig.: Use externally as directed.

Later the eczematous patches may be washed with soap and bran water or with water containing a small quantity of bicarbonate of sodium. Between such necessary baths the diseased parts may be cleansed with oil. "In the erythematous type of eczema a simple protective ointment, such as cold cream, white petroleum or wool fat is all that is necessary." In other words, what such skin needs is protection, and if the eczematous part is exposed to the outer air it may be well to

cover this ointment with one of the dusting powders above mentioned. When there is much inflammation with the eczema (eczema rubrum) the inflamed parts should be dusted with zinc oxid or bismuth, either separately or combined, as:

℞.	gm.		
Zinci oxidi	50	or	
Bismuthi subnitratis	50		ää, ʒii

M. et fac pulverem.

Sig.: Use as a dusting powder.

If there is much irritation a mild boric acid wash, as a tablespoonful of boric acid to a pint of water, may be used. Later Winfield suggests using the following ointment:

℞.	gm.		
Hydrargyri ammoniati	60		gr. ix
Zinci oxidi	1	or	gr. xv
Unguenti aquæ rosæ	30		ʒi

M. et Sig.: Use externally.

If there is much itching, phenol may be added to the above, as:

℞.	gm.		
Hydrargyri ammoniati	60		gr. ix
Zinci oxidi	1	or	gr. xv
Phenolis liquefacti	30		m. v
Unguenti aquæ rosæ	30		ʒi

M. et Sig.: Use externally.

If eczema has become chronic, either oil of cade or beta-naphthol may be used, as:

℞.	gm.		
Beta-naphtholis	1	or	gr. xv
Unguenti aquæ rosæ	30		ʒi

M. et Sig.: Use externally as directed.

Or:

℞.	gm. or c.c.		
Olei cadini	1	or	m. xv
Petrolati	30		ʒi

M. et Sig.: Use externally as directed.

Tar preparations should not be used carelessly, as they may aggravate the disease and cause an actual dermatitis, although many times an eczema seems hardly to be cured without their aid. Winfield says that occasionally an eczematous skin resents fatty applications, and in this case lotions should be used, such as a calamin lotion.

As above inferred from the various causes of eczema, genital reflexes due to adhesions must be corrected, and all skin parasites must be exterminated. When the child's skin is abnormally dry, which it may be even from birth, daily inunctions of oil should be given, and plenty of water should be given internally. For this condition Winfield does not mention thyroid, but many times a small amount of thyroid extract given to a child with such a condition of skin and with recurrent eczemas, is beneficial. The dose should be small, not more than 0.03 gm. (½ grain) of the dried extract, administered once a day. While such treatment, like all other treatments, is not always successful, it is often of marked benefit, not in acute eczemas, but in the chronic form just mentioned.

DUSTING POWDERS.

℞.	gm.		
Acidi borici	10		3iiss
Zinci oxidi	20	or	3v
Talci purifacti	30		ʒi

M. et Sig.: Use externally as a dusting powder.

℞.	gm.		
Pulveris talci salicylici (N. F.)	50	or	ʒii

Sig.: Use externally as a dusting powder.

This powder contains 3 per cent. of salicylic acid and 10 per cent. of boric acid.

℞.	gm.		
Pulveris antiseptici (N. F.)	50	or	ʒii

Sig.: Use externally as a dusting powder.

This powder is principally boric acid and contains 0.1 per cent. each of phenol, eucalyptol, menthol and thymol; 0.5 per cent. of salicylic acid and 12 per cent. of zinc sulphate. It is soluble and may be used in 5 per cent. aqueous solution.

℞.	gm.		
Lycopodii	50	or	ʒii

Sig.: Use externally as a dusting powder.

℞.	gm. or c.c.		
Amyli	25		3vi
Talci purifacti	25	or	3vi
Phenolis liquefacti	1		m. xv

Sig.: Use externally as a dusting powder.

OINTMENTS.

The following ointments are sedative and protective:

℞.	gm.		
Acidi borici	10		3iiss
Unguenti zinci oxidi	20		3v
Unguenti aquæ rosæ	20	or	3v

M. et Sig.: Use externally as directed.

℞.	gm.		
Unguenti acidi borici	30	or	ʒi

Sig.: Use externally as directed.

℞.	gm.		
Unguenti aquæ rosæ	30	or	ʒi

Sig.: Use externally as directed.

℞.	gm.		
Acidi salicyli	2		3ss
Adipis lanæ hydrosi	15	or	ʒss
Petrolati albi	30		ʒi

M. et Sig.: Use externally as directed.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

TORALD SOLLMANN, M.D.

Member of the Council, Professor of Pharmacology and Materia Medica at the Medical Department of Western Reserve University.

CLEVELAND, OHIO.

(*Continued from page 1917.*)

XII. "ETHICAL PRODUCTS" ADVERTISED INDIRECTLY TO THE LAITY.

In the last paper I had occasion to point out some of the ways in which dissimulating manufacturers exploit the patronage of physicians to introduce their wares to the laity. This refined Jekyll-Hyde performance is reached by Rule 4 of the Council, which reads:

> No article will be admitted whose label, package or circular accompanying the package, contains the names of diseases, in the treatment of which the article is indicated. The therapeutic indications, properties and doses may be stated.

Since this rule does not interfere in the slightest degree with the dissemination of such statements to physicians, but only to their appearance on the package, which goes to the patient and *not* to the physician, it might be supposed that the rule would be welcomed by such manufacturing houses as are sincere in their statements that they desire only the patronage of physicians. Indeed, the rule should be more far-reaching than it is. The Council has already ruled against containers on which the name is permanently affixed ("blown in the bottle"), and also holds that therapeutically suggestive names are contrary to the spirit of this rule, and enforces this interpretation in the case of mixtures, and is contemplating its extension to all products. I believe that the mention of all therapeutic indications whatsoever should be omitted from the package, and one firm at least has voluntarily accepted this suggestion.

But even in its original mild form, this rule has caused a great deal of difficulty. When it was first adopted it barred nearly every proprietary product of American manufacture and thus caused much delay in the admission of such products. This was the principal reason why German products were admitted at first much more rapidly than American products. Our German cousins had, on the whole, kept their labels free from these objectionable features; for some reason the custom

had not become so fashionable abroad. That many American manufacturers had adopted the fashion as a mere commercial custom, without ulterior motives, was evidenced by their prompt compliance with this rule, when its meaning was pointed out to them. Others required rather more argument, or the threat of the rejection of their products. On the whole, however, the response has been satisfactory, if not always quite voluntary, and the Council feels rather proud of the fact that the profession can now prescribe any of the admitted remedies without subjecting the patient to this form of advertising. There are a few exceptions in the case of some of the older suggestive names, which will be eliminated as rapidly as possible, but which, in the meantime, the prescriber himself can readily recognize.

The manufacturers whose products are not admitted by the Council have not generally participated in this reform; they prefer to continue their attempts to satisfy the two masters —or rather, to beguile the two dupes—the profession and the public. The profession can no longer plead the excuse of ignorance; and if every physician will follow his conscience these products will be very promptly eliminated from professional use. Many, I hope, will disappear altogether; others will at least abandon false pretenses and sail under their true colors—as confessed "patent medicines."

THE TESTIMONIAL AS A COMMERCIAL ASSET.

Incidentally, the hour of unmasking will reveal somewhat strikingly one folly of the testimonial habit. A testimonial which is no longer acceptable to the profession is still a commercial asset in advertising to the laity, and whether paid for or not, it will not generally be thrown aside until it becomes altogether too threadbare or ancient for further use. Antikamnia, listerine, Kutnow's powder and many more are well on the way. What about those who "testified" when these still basked in the rays of professional sunshine? Is anyone quite sure that his testimonial will not be put to the same prostitution? Is the high reputation of a firm a positive guarantee? Doubtless, there *are* firms, whose justly esteemed owners would not stoop to what they would consider dishonest practice. Professional and commercial ethics, however, are not quite the same thing, and what is deemed highly improper in one may be the custom, and, therefore, the right thing, in the other. Moreover, the founders of these highly respected houses wax old, and retire or die; but the firm may continue as long as there is any profit in the business. The house of Squibb is no longer in the hands of those who founded it, and to whom its high standard was due; the house of Lehn & Fink is no longer managed by the men whose names it bears. Indeed, this house of Lehn & Fink furnishes a fine illustration for the text—one illustration merely, for while this is the latest and most flagrant example, it is not unique.

MARKETABLE VALUE OF THE "URIC-ACID THEORY."

The details of the story may be read in THE JOURNAL.[1] The plot is briefly as follows: Some years ago, as everyone will recall, a tide of "uric-acid theory" enthusiasm swept over the civilized world, carrying with it a host of "uric-acid solvents;" prominent among these, a substance named piperazin. As usual, this was backed by numerous testimonials from men prominent and obscure.

The professional enthusiasm soon ebbed away, and I dare say that the testimonials would not be quite as numerous now. I believe that some of the writers are even a little ashamed that they were taken in so easily, and would prefer not to have the subject alluded to. Not so the manufacturers! The laity has not yet succeeded in eliminating the uric acid idea, and is, therefore, still using the eliminators. Do you see the commercial value of these obsolete testimonials? The public can not be expected to know that all these eminent professors and clinicians have renounced their opinions of a few years ago. Now is the time to go for the public, before it is too late.

A COMMERCIAL CATSPAW.

It would be quite below the dignity of the large chemical house which manufactures piperazin to advertise any of their products direct to the laity. Let us give it due credit for the fact. The house of Lehn & Fink is not troubled with such petty scruples. As the manufacturer's agents, they originally introduced the piperazin to the American profession, and know all about it; the testimonials are ready at hand; why throw them away? Accordingly, Lehn & Fink proceed to circularize the "better and more intelligent class of laymen" with advertisements of their "Piperazine Water," a solution of piperazin and phenocoll, *the* "scientific cure" for rheumatism and gout, attested and endorsed by all the most eminent members of the medical profession—witness our old friends, the resurrected testimonials! There they all are, nicely served—an appropriate tail to the kite of the "mail order" treatment of Edwin P. Adams, M.D., who writes so scientifically (to physicians), or entertainingly (to the public) on "Uric Acid Diseases and Their Treatment with Piperazine Water."

(To be continued.)

1. Feb. 29, 1908, 704.

PYRENOL.

Another Mechanical Mixture Advertised as a Chemical Compound.

We called attention recently[1] to the evolutionary process which arhovin, a preparation put out by a German firm, was undergoing in its change from the atomic to the molecular.

Still another product of the same firm—pyrenol—has fallen from its high estate as a chemical compound (as exploited by its manufacturers) to a mere mechanical mixture (as determined by disinterested analysts). Pyrenol is described by its makers as a synthetic combination containing the radicals of thymol, benzoic acid and salicylic acid united with sodium. To represent this product there was invented a graphic formula of fearful and wonderful design, which the manufacturer, when cornered, admitted was not only unscientific but impossible. The excuse given was that it—the formula—would assist the physician to get a clear idea of the composition of this unique synthetic and that it was not intended for chemists and pharmacists!

When analyzed by Zernik, of the Pharmaceutical Institute of the University of Berlin, pyrenol was found to be a mere mixture of sodium benzoate and sodium salicylate with small amounts of free benzoic acid (0.84 per cent.) and thymol (0.2 per cent.). This analysis was verified by Professor Thoms, director of the Pharmaceutical Institute, and also independently by Gadamer and Gaebel of Breslau. The manufacturer when confronted with these facts claimed that as the preparation was produced by melting the ingredients together, and not merely mixing them mechanically, that a synthetic substance was formed. That a new substance may in some cases be formed by fusing together two or more ingredients is unquestionably true, but the point to be considered is not what *may* happen but what *does* happen. In this particular case the result appears to be a simple mixture.

The firm that makes pyrenol, the *Chemisches Institut*, Dr. A. Horowitz, Berlin, also makes iodofan, the composition of which was recently[2] shown to differ vastly from the advertised claims. It also puts out visvit, a nostrum which has been exploited by means of clinical histories rehashed from write-ups of other preparations.[3] All of which goes to show that pharmaceutical literary fiction is not confined to the United States, but that German enterprise in this, as in other lines, is encroaching on a highly specialized field. Simple patriotism, however, would seem to dictate that if we must be humbugged let it at least be by home talent.

1. THE JOURNAL, May 9, 1908, 1541.
2. THE JOURNAL, March 7, 1908, 784.
3. THE JOURNAL, May 2, 1908, 1440.

Correspondence

Quinin in Pneumonia.

CANANEA, SONORA, MEXICO, April 25, 1908.

To the Editor:—I was surprised to see an abstract on page 1286 of THE JOURNAL, April 18, in which the massive doses of quinin in pneumonia are again advocated. The method can hardly be called new in any other sense than that Dr. Galbraith added the iron that made it "original." I have often been tempted to write on the subject, but I thought that so few physicians nowadays would be looking for a specific drug treatment for pneumonia that the discussion would be limited, and that my letter would have no right to space in THE JOURNAL. I have seen considerable discussion in good journals, however, and when I was in California many of my friends asked me about it, so that I think it well that the other side be made known.

It may be significant to many that those physicians here who have seen the treatment used most, now never use it in their private practice and most emphatically condemn it.

I feel sure that if many of the physicians trying this method had read the original papers they would not have taken any notice of the matter. I quote from "Fifty Consecutive Cases of Pneumonia Without a Death," by Dr. W. J. Galbraith in THE JOURNAL, Jan. 28, 1905, page 291.

"The present knowledge of the etiology (excepting exposure to wet, cold and alcohol) and pathology is somewhat limited, and I question the propriety of basing our management on the principles of theory alone. I am inclined to believe that an invasion of a combination of micro-organisms, or their products, are etiologic factors in pneumonia." The doctor would better incline a little further and believe it confidently.

"The fact that I have been able to detect in several cases tenderness and pain . . . in the region of the gall bladder during the first stage of the disease, has strengthened my theory of primary gall-bladder invasion. . . . What relation, if any, these preliminary symptoms have to pneumonia, and the factors that produce these symptoms, are [sic] difficult or impossible to explain." The explanation might be sought with advantage in an article on diaphragmatic pleurisy.

"While improvement at this early period of the disease is gratifying, it is no comparison to the results achieved by the treatment in preventing the dangerous *symptoms of cardiac failure, commonly called crisis.* (Italics mine.) . . .

"That iron is a principal factor in maintaining the strength of the heart, as well as in acting as an antiseptic, there can hardly be a doubt. . . .

"I have proved that quinin will not depress the heart in any stage of pneumonia; on the contrary, it is the most reliable stimulant, and produces the effect that we have so often looked for in strychnin and alcohol. . . . I strongly maintain that the use of stimulants, alcohol and strychnin, prior to the stage of resolution, is a dangerous practice, as it increases the mechanical conditions that are distressing the patient instead of strengthening the disabled heart." These two statements (a little more widely separated in the article) read like the advertisement of a new proprietary that will at the same time abolish the cough and stimulate the amount of expectoration.

"I find that bromid of lithium in combination with chloral controls the nervousness and delirium, which is probably produced by toxemia, much better than does morphin. . . ." What is the use of these drugs if quinin acts so much better?

"The absence of complications, with one exception, in the last fifty cases, has possibly been influenced by the treatment. I do not feel justified, however, in making any positive claims of this character on so limited a number of cases." It is to be wished that a like reserve had been shown in the articles and interviews written for the *Cananea Herald.*

Before a physician begins treating his patients in such an irrational and dangerous manner, he ought to get more evidence than that given in this article. If one will prescribe what one knows might on general principles prove dangerous, how much more easily will one prescribe a proprietary whose composition is unknown to one.

The following extracts are from "Wood's Therapeutics," twelfth edition:

"After toxic doses (of quinin) severe headache, delirium, stupor, complete deafness and blindness, dilated pupils, embarrassment of respiration, great weakness, convulsions, paralysis, and finally collapse may result, either comatose or delirious."

"Death has been shown by Henbach to be produced, at least in the lower animals, by a failure of respiration."

"The evidence is conclusive that both in man and the lower animals quinin in sufficient amount is a powerful depressant to the heart muscle or ganglia."

"On the red blood corpuscles quinin exerts a distinct influence in inhibiting their functional activity."

"The results of Binz' experiments seem to us to agree with the emphatic teachings of clinical experience that quinin has no direct specific influence in pyemic, septic or exanthematous diseases."

No one after reading up on the effects of quinin in large doses would think of trying to treat pneumonia with it.

During a three months' stay here in 1904 I had an opportunity to study this treatment and I was soon impressed by its harmfulness, as have been others who at different times have seen it used. As in most company hospitals, only the simplest case records were kept, and these by an untrained Mexican who occasionally put down the temperature, pulse, food, bowel movements and the medicine given. I noticed that the dosage, which at first was 75 grains, was reduced to 40 and often to 20. The patients often vomited the quinin shortly afterward, and they sometimes could not stand the iron. Dr. Galbraith's statement that there is no crisis is correct, because a sthenic case is soon transformed into what resembles a bad case of typhoid, and recovery is very slow, with delayed resolution, empyema, femoral phlebitis and other sequelæ. Are these included in what the doctor calls "discharging the patient practically well"? Several observers have occasionally noticed a remarkable freedom from tinnitus aurium and other signs of cinchonism after these doses. I have seen it also, and can explain it only by the fact that most of the remedy has been vomited or by the rapid appearance of the typhoid state in which the patient does not complain of anything, even the pleuritic pain. I have never seen the pulse benefited—though it often stands the treatment wonderfully—but I have seen the patient become nearly pulseless. I have also seen a big, strong young man take about three weeks for resolution after this treatment, and three days after his discharge from the hospital he dropped dead in his chair. A few months ago I saw a powerful young Mexican, who had every prospect of recovery, die after taking what I computed to be 40 grains of quinin. He had been doing well until the fourth day, when he took the "specific," which was followed by terrible tinnitus and a bursting feeling in the head. He became almost completely blind, was delirious all night and next day died after a few hours of stupor.

The tinnitus and blindness are not always recovered from, and I have seen several hopeless cases.

It is said that pneumonia is particularly malignant here, but I do not find that statement borne out either by the evidence of those who have practiced here longest or in my own experience. With the fresh-air treatment, which can not be too highly praised, with careful nursing directed especially to the avoidance of all effort by the patient, and the use of medicines only when definitely indicated, men recover here as well as anywhere else.

I would state in closing that I can only be surprised at the occasional good reports that come in. I class them with the eighty cases of typhoid I once saw reported in which a diet of vegetables and fruit caused no increase in mortality. A few cases do not prove anything.

We shall often fool ourselves, especially if we write up a series of cases while waiting to catch a train, as Dr. Galbraith says he did, without full notes before us, for our memories have a tendency to omit a few cases that unfortunately entered an otherwise perfect series.

WALTER C. ALVAREZ, M.D.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

CHLOROFORM ADMINISTRATION BY GAS LIGHT.

ALEXANDRIA, VA., May 31, 1908.

To the Editor:—Please state what changes may occur in chloroform vapor when it comes in contact with a gas flame and what injury may be done to the patient or attendants. M. M. O.

ANSWER.—Chloroform vapor, when in contact with a flame, is decomposed, with the formation of HCl, Cl, $COCl_2$ (carbonyl chlorid) and other substances. These products of decomposition are irritating to the respiratory passages, and a fatal case of poisoning from them has been reported. The irritant vapors are not likely to be produced in sufficient quantity to be dangerous if the room is well ventilated. It has been suggested that the ill effects of this decomposition may be prevented by hanging up a sheet or towel saturated with ammonia by which the acid vapors will be neutralized. The quantity of ammonia used should not be sufficient to be of itself a cause of irritation.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending June 6, 1908:

Ashford, B. K., and Baily, H. W., captains, when no longer needed at Hattiesburg, Miss., ordered to return to Washington Barracks.

Straub, P. F., major, ordered to report to the President of the Army War College for duty pertaining to the staff ride over the battle fields of Virginia.

Lynch, Chas., major, ordered to temporary duty in the Surgeon General's office, and on its completion to revert to status of leave.

Hutton, P. C., captain, ordered to return to Ft. Wm. H. Seward, Alaska, from Fort Benjamin Harrison, Ind.

Torney, G. H., colonel, granted leave of absence for 15 days.

Reynolds, C. R., captain, arrived in New York from the Philippines Division, on leave of absence.

Ebert, R. G., major, ordered to Vancouver Barracks, Washington, for duty as chief surgeon, Department of the Columbia.

LaGarde, L. A. lieut.-colonel, granted an extension of his leave of absence, to include June 24.

Munson, E. L., major, granted leave of absence for one month.

Baily, H. H., captain, returned to Fort Myer, Va., from detached service at Hattiesburg, Miss.

Crampton, L. W., colonel, LaGarde, L. A., and Banister, J. M., lieut.-colonels, appointed a board of review to meet at Washinpton, D. C., to review proceedings and findings of medical examining boards in the case of medical officers found disqualified for promotion.

Stone, J. H., major, relieved from duty with the Army of Cuban Pacification, and ordered to Newport News, Va., for further orders.

Sparrenberger, F. H., contract surgeon, granted leave for 1 month, 20 days, about July 10, 1908.

George, W. R. S., contract surgeon, returned to Fort Greble, R. I., from leave of absence.

Cutliffe, W. O., contract surgeon, relieved from service in the Philippines Division and ordered to sail August 15 for San Francisco., and there report for orders.

Whinnery, J. C., dental surgeon, left Ft. Stevens, Ore., for duty at Ft. Columbia, Ore.

Voorhies, H. G., dental surgeon, left Ft. Meade, S. D., for duty at Ft. Washakie, Wyo.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the two weeks ending June 6, 1908.

Cather, D. C., P. A. surgeon, commissioned P. A. surgeon from July 9, 1907.

Lane, H. H., asst.-surgeon, appointed asst.-surgeon from May 5, 1908.

Mayers, G. M., P. A. surgeon, ordered to continue treatment at the Naval Hospital, Mare Island, Cal.

Reed, E. U., asst.-surgeon, detached from the *Charleston* and ordered to the Navy Yard, Mare Island, Cal.

Castro, D. H., asst.-surgeon, detached from the *Maine* and ordered to the Naval Station, Guam, L. I.

Munger, C. B., asst.-surgeon, detached from the *Supply* and ordered to the *Maine*.

Holeman, C. J., asst.-surgeon, detached from the Naval Training Station, San Francisco, Cal., and ordered to the *Charleston*.

Old, E. H. H., asst.-surgeon, detached from the Naval Hospital, Canacao, P. I., and ordered to Washington, D. C., for examination for promotion, and then to wait orders.

McMurdo, H. B., acting asst.-surgeon, ordered to the Naval Training Station, San Francisco, Cal.

Warner, R. A., P. A. surgeon, commissioned P. A. surgeon from May 3, 1908.

Bishop, L. W., P. A., surgeon, detached from the *Hancock* and ordered to the Naval Recruiting Station, Indianapolis.

Allen, A. H., asst.-surgeon, detached from duty in connection with the Cape Cruz-Caslida Survey Expedition and ordered to duty with marines at Havana, Cuba.

White, E. C., asst. surgeon, detached from duty with marines at Havana, Cuba, and ordered home to wait orders.

Schaller, W. F., asst.-surgeon, resignation accepted to take effect June 1, 1908.

Biello, J. A., asst.-surgeon, detached from the Naval Hospital, Portsmouth, N. H., and ordered to the *Solace*.

Cook, F. C., surgeon, detached from the Naval Academy, and ordered to the *North Carolina*, June 6, 1908.

Smith, C. G., P. A. surgeon, ordered to the Naval Hospital, Portsmouth, N. H.

McDonell, W. N., P. A. surgeon, detached from the Naval Recruiting Station, Buffalo, N. Y., and ordered to the *Severn*, for duty in connection with the Navy Rifle Team.

Brister, J. M., P. A. surgeon, detached from the Naval Hospital, Puget Sound, Washington, and ordered to continue other duties.

Holeman, C. J., asst.-surgeon, orders of May 26 modified; detached from Naval Training Station, San Francisco, and ordered to the *Arethusa*.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and noncommissioned officers of the Public Health and Marine-Hospital Service for the 14 days ended June 3, 1908:

Cobb, J. O., surgeon, granted leave of absence for 7 days.

Smith, A. C., surgeon, granted leave of absence for 1 month and 15 days, from July 6, 1908.

Young, G. B., surgeon, detailed to attend the meeting of the Lake Michigan Water Commission, at Grand Rapids, Michigan, May 27, 1908.

Rosenau, M. J., surgeon, granted leave of absence for 1 month.

Gardner, C. H., P. A. surgeon, granted leave of absence for 1 month, from May 31, 1908.

White, M. J., P. A. surgeon, granted leave of absence for 1 month, from June 1, 1908.

King, W. W., P. A. surgeon, relieved from duty at San Francisco Quarantine Station, and directed to report to the medical officer in command of the Marine Hospital at San Francisco, for duty and assignment to quarters.

Holt, J. M., P. A. surgeon, detailed to attend the annual meeting of the Oregon State Medical Association, Portland, Ore., July 1-3, 1908.

Trask, J. W., P. A. surgeon, granted leave of absence for 5 days, from June 2, 1908.

Roberts, Norman, asst.-surgeon, granted leave of absence for 3 days, from May 25, 1908, under Paragraph 191, Service Regulations.

Roberts, Norman, asst.-surgeon, granted leave of absence for 1 month, from June 1, 1908.

Hunt, Reid, Chief Division of Pharmacology, detailed to attend the Council of Pharmacology and Chemistry, in Chicago, Ill., June 2, 1908, on the completion of which duty to rejoin his station.

Carter, P. I., acting asst.-surgeon, granted leave of absence for 3 days, from May 19, 1908, under Paragraph 210, Service Regulations.

Cleaves, F. H., acting asst.-surgeon, granted leave of absence for 1 day, May 22, 1908, on account of sickness.

Eichelberger, W. W., acting asst.-surgeon, granted leave of absence for 15 days, from June 10, 1908.

Fahey, E. W., acting asst.-surgeon, granted leave of absence for 10 days, from May 26, 1908.

Hunter, W. R., acting asst.-surgeon, granted leave of absence for 4 days, from June 4, 1908.

Keatley, H. W., acting asst.-surgeon, granted leave of absence for 3 days, from May 13, 1908, on account of sickness.

Naulty, C. W., Jr., acting asst.-surgeon, granted leave of absence for 5 days, from June 17, 1908.

Pearse, H. E., acting asst.-surgeon, granted leave of absence for 3 months without pay, from June 15, 1908.

Thornton, M. J., acting asst.-surgeon, granted leave of absence for 1 month, from June 5, 1908.

Wakefield, H. C., acting asst.-surgeon, granted leave of absence for 5 days, from May 21, 1908, under Paragraph 210, Service Regulations.

Bell, J. M., pharmacist, granted leave of absence for 5 days, from May 19, 1908, under Paragraph 210, Service Regulations.

APPOINTMENT.

Dr. Nathanael L. A. K. Slamberg appointed as acting asst.-surgeon, for duty at Eastport, Idaho.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended June 5, 1908:

SMALLPOX—UNITED STATES.

California: Los Angeles, May 9-16, 1 case; San Francisco, 4 cases.

Florida: Jacksonville, May 16-23, 1 case.

Illinois: Chicago, May 16-23, 1 case; Springfield, May 14-21, 2 cases.

Indiana: Fort Wayne, May 18-25, 1 case; La Fayette, 3 cases; Terre Haute, May 16-23, 10 cases.

Kansas: Kansas City, May 16-23, 7 cases; Wichita, April 18-25, 6 cases.

Kentucky: Covington, May 16-23, 5 cases.

Louisiana: New Orleans, May 16-23, 4 cases.

Michigan: Detroit, May 16-23, 1 case.

Minnesota: Winona, May 16-23, 1 case.

Missouri: Kansas City, May 16-23, 10 cases; St. Joseph, May 19-26, 16 cases; St. Louis, May 16-23, 4 cases.

Montana: Butte, May 12-19, 1 case.

North Carolina: Charlotte, May 16-23, 1 case.

Ohio: Cincinnati, May 15-23, 3 cases; Dayton, May 16-23, 1 case.

Texas: Galveston, May 15-22, 3 cases.

Virginia: Richmond, May 16-23, 1 case.

Washington: Spokane, May 9-16, 16 cases.

Wisconsin: La Crosse, May 16-23, 6 cases; Racine, May 16-23, 3 cases.

SMALLPOX—FOREIGN.

Brazil: Manaos, April 18-25, 1 case; Rio de Janeiro, April 19-26, 163 cases, 59 deaths.
Canada: Hamilton, April 1-30, 12 cases.
China: Hongkong, April 11-18, 23 cases, 18 deaths; Shanghai, April 12-26, 6 deaths.
Egypt: Cairo, April 22-May 6, 14 cases, 5 deaths.
France: Paris, May 2-9, 4 cases; Toulon, April 1-30, 7 cases.
Great Britain: Glasgow, May 8-15, 1 case; London, May 2-9, 1 case, 1 death.
India: Bombay, April 1-28, 48 deaths; Calcutta, April 11-18, 28 deaths.
Italy, general, May 2-9, 39 cases.
Java: Batavia, April 4-11, 5 cases.
Mexico: Aguascallentes, May 10-17, 2 deaths; Mexico City, May 4-11, 16 deaths; Progreso, April 1-30, 1 death.
Portugal: Lisbon, May 2-9, 4 cases.
Russia: Moscow, April 18-May 2, 45 cases, 25 deaths; Odessa, 20 cases; Riga, April 25-May 9, 3 cases; St. Petersburg, April 18-25, 5 cases, 5 deaths; Warsaw, March 28-April 18, 14 deaths.
Spain: Denia, May 2-9, 3 cases, 1 death; Madrid, April 1-30, 1 death; Seville, 2 deaths; Valencia, May 2-9, 21 cases.
Transvaal: Pretoria, April 11-18, 1 case.
Turkey: Bagdad, April 11-18, 30 cases, 2 deaths; Constantinople, April 26-May 10, 4 deaths.

YELLOW FEVER.

Brazil: Manaos, April 25-May 2, 1 case, 1 death; Para, 15 cases, 12 deaths.
Mexico: Laguna de Terminos, May 30-June 2, 2 deaths on Russian bark *Lembit*.

CHOLERA.

India: Bombay, April 21-28, 5 deaths; Calcutta, April 11-18, 267 deaths; Madras, April 18-24, 2 deaths; Rangoon, April 11-18, 4 deaths.

PLAGUE.

China: Foochow, April 11-18, present; Hong Kong, 20 cases, 15 deaths.
Egypt: General, April 12-May 12, 268 cases, 150 deaths; Alexandria, April 1-May 12, 4 cases, 1 death.
India: General, April 18-25, 6,755 cases, 5,523 deaths; Bombay, April 21-28, 462 deaths; Calcutta, April 11-18, 118 deaths; Rangoon, 27 deaths.
Turkey: Bagdad, June 2, present.

Association News

NEW MEMBERS.

List of new members of the American Medical Association for the month of May, 1908:

ALABAMA.

Acker, C. T., Columbiana.
Blair, H. W., Sheffield.
Hutton, C. C., Yellow Pine.

ARIZONA.

Cohen, M.D., Bisbee.
Cutter, W. D., Bisbee.
Murrieta, A. J., Jerome.

ARKANSAS.

Barry, W. H., Hot Springs.
Hartsell, W. L., Draughon.
Johnson, Hugh, Barling.
Moncrief, J. J., Beebe.
Price, C. C., Douglas.
Steele, S. B., Hot Springs.

CALIFORNIA.

Elliott, A. J., San Diego.
Jones, J. W., South Pasadena.
Klonk, M., Lodi.
Meierdierks, W. A., San Francisco.
Neff, F. F., Concord.
Russ, Raymond, San Francisco.
Savage, P. M., China, Cal.
Scott, A. J., Los Angeles.
Voorhees, H. M., Los Angeles.

COLORADO.

Claybaugh, W. W., Fort Morgan.
Dawson, J. F., Platteville.
Day, D. W., Ft. Collins.
Rook, C. W., Julesburg.
Woodbridge, J. H., Pueblo.

CONNECTICUT.

Alcott, R. W. E., West Hartford.
Egbert, J. H., Willimantic.
McWhorter, E. F., New Haven.
Swasey, E. P., New Britain.
Ward, J. W., Hartford.

DISTRICT OF COLUMBIA.

Barnhart, G. S., Washington.
Hynson, L. M., Washington.

FLORIDA.

McEwan, J. S., Orlando.

GEORGIA.

Cato, F. L., Americus.
Rogers, W. D., Kensington.

IDAHO.

Froom, J. E., Boise.
Hawley, F. S., Mountain Home.

INDIANA.

Allen, H. R., Indianapolis.
Ambrose, U. C., Connersville.
Arthur, N. Maude, Washington.
Baker, W. H., Terre Haute.
Beavers, S. D., Decatur.
Bills, L. F., Atlanta.
Botts, E. H., Zanesville.
Coole, A. H., Frankfort.
Cook, T. R., Bowling Green.
Crampton, C. C., Delphi.
Cupp, M. F., Metamora.
Cuthbert, F. S., Kingman.
Dando, G. H., Orland.
Davis, E. J., Moreland.
Darroch, S. C., Cayuga.
Denant, M. S., Walkerton.
Dyar, E. W., Ossian.
Eckelman, M. M., Elkhart.
Farver, M. A., Middlebury.
Flack, O. M., Boswell.
Furniss, H. W., Indianapolis.
Galbreth, W. H., Rockfield.
Gardner, C. A., Kendallville.
Gilbert, J. L., Kendallville.
Gillum, W. H., Rockville.
Givens, C. C., Lewis.
Goodrich, C. D., Elkhart.
Grant, L. E., Marengo.
Greenwell, Franklin, Huntertown.
Hall, H. M., Camden.
Hamilton, A. N., Waynetown.
Hatfield, I. N., Bluffton.
Holland, J. E. P., Bloomington.
Horton, C. J., Argos.
Hoy, B. F., Syracuse.
Hunt, L. F., Anderson.
Johnson, C. E., Otis.
Jones, T. M., Anderson.
Kimmel, C. C., Ft Wayne.
King, F. A., Garrett.
Kister, G. H., Elberfeld.
Kutch, M. H., Terre Haute.
Lake, G. B., Wolcottville.
Lawhead, W. E., Inwood.
Leuthart, C. P., Galena.
Lloyd, A. W., Marion.
Luckey, J. E., Wolf Lake.
Macbeth, A. H., Fort Wayne.
Martin, J. S., Rolling Prairie.
McArdle, J. E., Ft. Wayne.
McDonald, A. C., Warsaw.
McGaughey, W. M., Greencastle.
McQuoun, O. W., Marion.
Mentzer, S. E., Monroville.
Myers, I. N., Maples.
Nye, J. H., Cromwell.
Page, W. B., Middlebury.
Parker, E. E., Culver.
Patten, V. C., Morristown.
Poinier, E. W., Andrews.
Preston, H. P., Plymouth.
Pulskamp, Bernard, Rome City.
Rawles, L. T., Huntertown.
Reed, J. V., Indianapolis.
Rogers, E. A., Somerset.
Schrock, H. W., La Grange.
Shultz, J. J., Delphi.
Shumaker, W. F., Butler.
Snee, H. Boyd, South Bend.
Snyder, B. F., Camden.
Spaulding, L. A., Bluffton.
Stroup, C. C., Mishawaka.
Stout, O. L., Upland.
Stunkard, T. C., Terre Haute.
Thomson, J. F., Garrett.
Trook, E. M., Marion.
Vancleave, R. H., Farmersburg.
Vereker, M. F., Kitchel.
White, W. J., Gary.
Williams, L. L., Brazil.
Williamson, A. A., Marshall.
Wilson, LeRoy, Kingsbury.
Wood, Charles, Sardinia.
Woodruff, C. A., Ligonier.
Young, M. H., Harmony.

ILLINOIS.

Acres, Louise, Chicago.
Allan, J. G., Edgewood.
Anderson, J. A., Chicago.
Andrews, J. J., Chicago.
Atwood, R. J., Paxton.
Austin, A. M., Stronghurst.
Bacon, M. W., Chicago.
Balensiefer, O., Peru.
Ball, A. W., Rushville.
Barlow, T. H., Glen Ellyn.
Barnes, O. F., Arcola.
Barnhizer, J. G., Forrest.
Bauman, F., Chicago.
Bechtold, W. G., Breese.
Bennett, H. F., Litchfield.
Benz, H. A., Wheeling.
Bert, Eddy, Chicago.
Bishop, R. W., Chicago.
Blayney, F. H., Chicago.
Boehmer, O., Chicago.
Bohart, W. H., Chicago.
Borin, W. A., Bartonville.
Borland, L. C., Chicago.
Boshell, H. N., Melvin.
Boyer, W. N., Aledo.
Boynton, L. V., Vermont.
Brian, C. F., Bellmont.
Brigham, C. R., Brookville.
Brooks, Overton, Chicago.
Brown, A. E., Waukegan.
Brydges, J. C., Chicago.
Bucknam, A. F., Warren.
Burkholder, J. F., Chicago.
Bushnell, G. E., Rochelle.
Carr, J. G., Chicago.
Chapman, C. M., Deer Creek.
Clark, Dwight, Evanston.
Clarke, G. W., Roseville.
Clayton, C. F., Chicago.
Colby, B. D., Chicago.
Collins, J. S., Carlinville.
Conant, P. B., Roseville.
Conibear, W. H., Morton.
Copenhaver, J. H., Bellflower.
Corcoran, E. A., Chicago.
Corcoran, Katherine W., Chicago.
Cramp, A. J., Chicago.
Crist, J. C., Chicago.
Cruikshank, R. D., Danville.
Culver, Louise L., Sandwich.
Davis, C. B., Chicago.
Dean, G. A., Lane.
Dechow, P. H., Kinderhook.
Dern, H. J., South Chicago.
Dillman, J. V., Ingraham.
Dimond, S. B., Albany.
Doe, Anders, Chicago.
Doederlein, T. J., Chicago.
Drake, A. K., Macomb.
Duckwall, M. H., Moweaqua.
Dwyer, Anna, Chicago.
Elfrink, B. F., Chenoa.
Ely, C. F., Chicago.
Engelbrectson, Ferdinand, Chicago.
Ewan, R. T., Smithfield.
Exton, Lucy A., Thomasboro.
Farquharson, H. M., Chicago.
Fern, W. J., Tunnel Hill.
Flannery, R. E., Chicago.
Forrester, C. B. G., Chicago.
French, L. C., Chicago.
Freund, A. L., Chicago.
Friend, Emanuel, Chicago.
Frost, H. B., Chicago.
Fuller, G., Chicago.
Fuller, G. W., Paris.
Gardner, Stella M., Chicago.
Geen, J. S., Utica.
Geiger, A. H., Chicago.
Geiger, C. W., Kankakee.
Gibbs, S. P., Chicago.
Gilmore, Emma W., Chicago.
Golden, I. J. K., Chicago.
Goodwin, C. G., Chicago.
Gotchy, E. D., Chicago.
Gould, Henrietta, Chicago.
Gourley, F. L., Waukegan.
Grant, J. F., Chicago.
Green, J. A., Rockford.
Griffitts, T. H. D., Springfield.
Griswold, W. C., Princeton.
Guerin, John, Chicago.
Gunn, H. F., Galena.
Hagans, F. M., Lincoln.
Haley, S., Wellington.
Hall, W. T., Toulon.
Hall, W. W., McLeansboro.
Hamisfar, Florence N., Chicago.
Hanes, W. W., Mt. Morris.
Hardinger, J. D., Gays.
Harper, Mary McKibbin, Maywood.
Harrison, C. W., Chicago.
Harrower, H. R., Kankakee.
Hartman, W. W., Chicago.
Harvey, J. A., Chicago.
Hash, Evelyn St. Croix, Chicago.
Hash, E. W., Chicago.
Heckman, I. J., Hinckley.
Hedges, A. N., Matteson.
Heinen, Aloys, Chicago.
Hench, J. B., Hinsdale.
Herstman, H. G., Vergennes.
Hertig, Elmira, Galesburg.
Herz, Karl, Chicago.
Hill, E. L., Percy.
Hill, T. C., Fancy Prairie.
Hornsby, J. A., Chicago.
Hoyt, D. C., Chicago.
Hubbard, O. W., Batavia.
Irenaus, Carl, Chicago.
Isom, W. C., Rockwood.
Jackman, F. O., Bloomington.
Jackson, Dudley, Chicago.
Jacobs, H. L., Chicago.
Joffee, Wm., Chicago.
Johnson, G. W., Savanna.
Johnson, S. R., Divernon.
Johnston, J. A., Byron.
Johnston, R. C., Aledo.
Jones, C. L., Noble.
Jones, R. R., Sherman.
Jordan, G. T., Chicago.
Jungels, W. W., Chicago.
Kaa, Niels A., Stockton.
Keller, Alvin, Candiff.
Kelly, P. H., Chillicothe.
Keller, U. S. G., Warren.
Kemp, N. C., Chicago.
Kerlin, E. I., Chicago.
Kilgore, J. G., Vermillion.
Kirby, D. D., Carter.
Kitzing, F. F., Chicago.
Klouts, C. E., Cherry Valley.
Knapheide, W. S., Quincy.
Kratz, E. A., Champaign.
Kreye, Paul, Chicago.
Krost, R. A., Chicago.
Kunze, W. E., Belleville.
Lampe, H. G., Chicago.
Landau, B. G., Chicago.
Landau, D. R., Chicago.
Langhorst, F. H., El Paso.
Langstaff, J. H., Roberts.
Leigh, C. W., Chicago.
Lenz, J. A., Chicago.
Leonard, T. H., New Holland.
Letourneau, R. A., Chicago.
Lewis, J. W., Chicago.
Lightle, G. A., Plainville.
Linden, F. C., Chicago.
Lindorff, O. W., Swedona.
Lindsay, J. C., Chicago.
Little, Z., Chicago.
Long, J. P., Chicago.
Lowe, A. L., Robinson.
Lumley, G. G., Chicago.
Lytle, C. F., Altoona.
Macdonald, P. S., Chicago.
MacNab, M.D., Chicago.
Manning, E. T., Galesburg.
Marder, J. L., Venice.
Marshall, H. L., Stronghurst.
Martin, F. A., Lakewood.
Martin, H. G., Chicago.
Martin, S. C., Anna.
Martin, W. B., Sherrard.
Matthew, E. S., Divernon.
Mauzey, W. H., Findlay.
Maxwell, G., Polo.
McClure, C. F., La Grange.
McCormick, O., Herscher.
McCutchan, J. F., Alexis.

McDonald, C. H., Decatur.
McDowell, W. S. L., Chicago.
McEwen, Mary G., Evanston.
McKinney, T. J., Gifford.
Melton, J. E., Fish Hook.
Mercer, W. E., Raymond.
Meyer, A. W., Bloomington.
Meyers, H. L., Chicago.
Millar, A. J., Edgington.
Miller, J. M., Villa Grove.
Miller, W. E., Columbus.
Milton, B. S., Chicago.
Mitchell, O. L., Chicago.
Molkup, F. C., Chicago.
Moore, R. V., Freeport.
Moore, S. M., Chicago.
Morey, L. L., Vandalia.
Morse, Eliza R., Chicago.
Morse, M. R., Harvey.
Nathason, J. L., Chadwick.
Noren, G. P., Kewanee.
O'Brien, G. G., Chicago.
O'Callaghan, C. D., Chicago.
Ohlendorf, W. C., Chicago.
Olson, W. C., Chicago.
Overholser, J. D., Milledgeville.
Oyen, A. M., Chicago.
Palmer, J. M., Grays Lake.
Parker, C. H., Chicago.
Paul, I. O., Winnebago.
Peacock, S. B., Baylis.
Phelps, L. B., Chicago.
Phifer, C. H., Chicago.
Piper, C. W., Chicago.
Plumer, J. A., Trivoli.
Pollock, H. L., Chicago.
Pollock, M. D., Decatur.
Porterfield, W. L., Chicago.
Powers, J. W., Mt. Carroll.
Pratt, Earl M., Oak Park.
Pratt, G. N., Chicago.
Pratt, H. L., Elgin.
Pribble, E. B., St. Elmo.
Price, W. J., Princeville.
Putman, H. C., Canton.
Quinn, J. J., Chicago.
Rich, Katherine B., Chicago.
Richards, Ellen A., Streator.
Rightman, Wm., Chicago.
Riley, J. H., DeKalb.
Rinedollar, N., Mt. Carroll.
Ring, Frances A., Chicago.
Roarke, J. P., Bushnell.
Roberts, A. J., Ottawa.
Roberts, B. T., Morgan Park.
Robinson, L. F., Ullin.
Rogler, H. O., Mason City.
Rohr, F. W., Chicago.
Roth, C. R., Chicago.
Rothstein, Thos., Chicago.
Royall, B. A., Villa Ridge.
Ruggles, E. W., Chicago.
Runkle, G. D., Industry.
Rudd, Helga, Chicago.
Sadler, Lena K., Chicago.
Salinger, David, Chicago.
Salyers, J. O., Springfield.
Sass, Marja Dowiatt, Chicago.
Schwingel, W. H., Aurora.
Scott, W. H., Dallas City.
Seaton, C. M., Morrisonville.
Senn, W. N., Chicago.
Shaffer, Vesper, Chicago.
Sibley, W. C., Fairfield.
Sidley, F. K., Peoria.
Simmons, J. C., Norris.
Sloan, J. F., Peoria.
Smedley, J. E., Chicago.
Smith, R. T., DeKalb.
Speik, F. A., Chicago.
Sperry, H. C., Hull.
Staley, Clinton, Enfield.
Standard, A. P., Macomb.
Steele, W. A., Chicago.
Steen, E. R., Joliet.
Stewart, J. C., Anna.
Stout, A. M., Chicago.
Stuart, G. J., Chicago.
Sweeting, G. C., Morton Park.
Tate, L. N., Carthage.
Taylor, C. M., Bethany.
Taylor, O. F., Granville.
Thompson, M. W., Chicago.
Thompson, P. C., Jacksonville.
Thompson, Theodore, Shelbyville.
Tucker, G. W., Chicago.
Turner, C. W., Harrisburg.
Tuttle, H. H., Springfield.
Vick, J. W., Carterville.
Wadsworth, J. L. R., Collinsville.
Walker, F. J., Maquon.
Walker, J. H., Effingham.
Warder, W. S., Nauvoo.
Watson, R. L., Florid.
von Wedelstaedt, Bismarck, Chicago.
Weinlander, John, Chicago.
Weir, J. W., Sparta.
Wheeler, Ralph, Chicago.
Whited, D. F., Dahlgren.
Wickham, R., Chicago.
Williams, E. C., Downs.
Williams, J. F., Chicago.
Wolff, M. B., Chicago.
Wood, Glenn, Chicago.
Worstall, S. A., Waldron.
Wuerth, J. J., Chicago.
Yerger, C. F., Chicago.
Yerkes, T. P., Upper Alton.
Young, W. A., Springfield.
Zeigler, W. T., Canton.
Zerfass, F. P., Sullivan.
Zorger, Annie L., Champaign.

IOWA.

Amos, H. H., Charles City.
Augustine, Grant, Minden.
Ball, J. A., Stuart.
Barry, P. J., Auburn.
Bendixen, P. A., Davenport.
Bilby, A. M., Galva.
Bilger, F. W., Riverton.
Bryant, A. J., Blairstown.
Byerly, A. J., Coggon.
Chapman, E. C., Ft. Madison.
Chittum, J. H., Wapello.
Christensen, C. J., Jewell.
Cooper, J. C., Villisca.
Craig, Jas., Keosauqua.
Crane, G. H., Holstein.
Crowley, D. F., Des Moines.
Day, W. R., Moravia.
Delahunt, J., Marathon.
Dosh, G. W., Brighton.
Fleming, J. C., Burlington.
Garver, B. J., Iowa Falls.
Harken, C. R., Osceola.
Henry, C. W., Coon Rapids.
Hellman, E. S., Ida Grove.
Hennessy, F. A., Calmar.
Henry, C. A., Farson.
Heslop, Payne R., Van Horne.
Hoffman, P. M., Tipton.
Howard, W. A., Holstein.
Jarvis, H. D., Rosehill.
Jenkins, E. R., Washington.
Johnson, J., Jr., Alden.
Johnson, M. E., Corning.
Karterman, M. R., Ida Grove.
Kershner, F. O., Clinton.
Knepper, J. J., Baldwin.
Knipe, J. B., Armstrong.
Labagh, N. W., Mystic.
La Force, B. D., Ottumwa.
Lashbrook, E. E., Shellsburg.
Layman, D. W., Garwin.
Leigh, H. J., Carroll.
Lesher, H. B., Fairfield.
Love, F. L., Iowa City.
Lyon, J. D., Chester.
Mattison, C. W., Swea City.
McCowen, Jennie, Davenport.
McFau, W. D., Miles.
Mehlhop, C. W., Dubuque.
Moore, M. F., Martinsburg.
Morris, Livingston, Stockport.
Morris, Z. E., Stockport.
Noland, C. A., Boone.
Park, George, Sioux City.
Pfannebecker, Wm., Sigourney.
Piper, L. P., Des Moines.
Replogle, J. A., Udell.
Roberts, F. M., Ralston.
Robertson, A. A., Crescent.
Shaffer, C. J., Carson.
Sherman, B. H., Dexter.
Smith, R. C., Cedar Rapids.
Stevenson, E. F., Webster City.
Stoecks, W. A., Davenport.
Sweet, H. L., Mt. Etna.
Townsend, D. J., Lohrville.
Werner, C. A. A., Albert City.

KANSAS.

Adams, W. A., Easton.
Barker, J. L., Dearing.
Bigelow, G. J., Caney.
Clark, J. D., Wichita.
Dillon, J. A., Larned.
Eager, J. L. B., Kansas City.
Home, F. B., Beloit.
Miller, Max, Newton.
Olson, Evald, Burlingame.
Stahl, C. W., Auburn.
Walker, H. M., Pratt.
Wilson, R. M., Norton Ville.
Wright, R. E., Bern.

KENTUCKY.

Asman, Bernard, Louisville.
Bean, A. J., Hardin.
Beard, S. L., Shelbyville.
Buck, G. H., Grayson.
Childress, W. J., Livingston.
Chipps, J. E., Birdsville.
Clark, O. P., Russell.
Clement, I. H., Marion.
Darbro, J. R., Eagle Station.
Eisenman, F. T., Louisville.
Ellis, P. V., Ghent.
Ford, G. W., Powder Mills.
Foster, R. L., Hartford.
Gowdy, E. L., Campbellsville.
Graham, E. J., Hudgins.
Hall, S. J., Constantine.
Hampton, J. B., Millerstown.
Harover, S. R., Maysville.
Harwood, C. P., Milton.
Hatfield, J. H., Barren Fork.
Heim, J. W., Louisville.
Holland, D. J., Louisville.
Maguire, J. D., Lexington.
McGuire, C., Wedonia.
McIntyre, E. L., Woodlawn.
McKenna, P. K., Mt. Sterling.
McMahan, J. W., Bedford.
Milner, W. L., Union Star.
Moser, J. T., Lebanon.
Peters, S. B., Gray.
Powell, H. B., Corydon.
Quesenberry, J. L., Worthington.
Rankin, C. B., Monticello.
Sanders, Wm., Louisville.
Todd, J. N., Fredonia.
Vicars, J. W., Pikeville.
Willmoth, A. D., Louisville.

LOUISIANA.

Buffington, W. R., Yellow Pine.
Schulze, William, Monroe.

MAINE.

Parker, R. A., Auburn.
Smith, F. M., Portland.
Sturgis, J., Auburn.
Tomlinson, E., Orono.

MARYLAND.

Goldsborough, F. C., Baltimore.
Iglehart, J. H., Baltimore.
Norris, R. R., Baltimore.
Pessagno, E. L., Baltimore.
Shemwell, J. F., Baltimore.

MASSACHUSETTS.

Cooper, A. V., Palmer.
Coyne, T. J., Boston.
Ehrenfried, A., Boston.
Lucas, W. P., Boston.
Mather, J. A., Colerain.
Merritt, L. A., Bridgewater.
Milot, A. F., Taunton.
Prince, C. O., Melrose.
Reynolds, G. E., Pittsfield.
Towle, E. D., Salem.
Tyzzer, E. E., Wakefield.
Wood, B. E., Alston.

MICHIGAN.

Bauer, Frederick, Moscow.
Begle, H. L., Detroit.
Braidwood, C. M., Dryden.
Butler, P. T., Kalamazoo.
Connor, Ray, Detroit.
Elwell, Loiza, Battle Creek.
Epler, B. N., Kalamazoo.
Ericsson, B. O., Ionia.
Garbutt, V. L., Detroit.
Garner, H. B., Traverse City.
Graham, D. M., Detroit.
De Haas, N., Fremont.
Haines, T. J., Three Rivers.
Harris, L. J., Jackson.
Herrick, A. W., Bay City.
Holm, M. L., Lansing.
Irwin, A. J., Port Huron.
Kirwan, E. J., Ludington.
Kremers, E. D., Holland.
Leenhouts, A., Holland.
Leighton, N. E., Hopkins.
Livingstone, P. I., Detroit.
McGraw, T. A., Jr., Detroit.
Miller, J. A., Farmington.
Moon, Cora A., Grand Rapids.
Moshier, Bertha E., Battle Creek.
Orr, J. W., Flint.
Paine, E. M., Grand Lodge.
Pitz, H. R., Kalamazoo.
Powers, L. I., Muskegon.
Quick, P. A., Muskegon.
Roob, G. W., Flushing.
Rozema, S. L., Grand Rapids.
Rumer, J. F., Davison.
Sands, T. E., Battle Creek.
Seager, G. B. M., Adrian.
Sellards, G. B., Deerfield.
Sethney, H. T., Crystal Falls.
Shepard, B. A., Plainwell.
Starring, Anna M., Crystal Falls.
Stone, R. C., Battle Creek.
Stoner, Laura B., Battle Creek.
Toles, L. W., Lansing.
Walker, R. E., Ann Arbor.
Wickham, A. B., Detroit.

MINNESOTA.

Arlirod, D. L., Hutchinson.
Bacon, Knox, St. Paul.
Ball, C. R., St. Paul.
Carman, J. B., Detroit.
Chowning, Wm. M., Minneapolis.
O'Connor, J. V., St. Paul.
Cook, P. B., St. Paul.
Dolder, F. C., St. Charles.
Freeborn, J. A., Fergus Falls.
Goodrich, Judd U., St. Paul.
Hall, A. R., St. Paul.
Hedback, A. E., Minneapolis.
Hodgkinson, J. G., So. St. Paul.
Holm, P. F., Wells.
Kennedy, Jane F., Minneapolis.
Lynch, M. J., Minneapolis.
McCollum, C. A., Minneapolis.
McKelway, G. I., St. Paul.
Muir, E. S., Winona.
Noth, H. W., Minneapolis.
Pease, G. R., Redwood Falls.
Ramsey, W. R., St. Paul.
Rees, S. P., Minneapolis.
Renz, G. A., St. Paul.
Sheldon, W. D., Minneapolis.
Sternes, E. G., St. Paul.
Ulrich, Mabel S., Minneapolis.

MISSISSIPPI.

Garroway, E. H., Jackson.
Martin, L. E., Anguilla.

MISSOURI.

Baker, W. M., St. Louis.
Carbaugh, Eugene, Kansas City.
Chilton, J. C., Hannibal.
Conover, C. C., Kansas City.
Cotton, T. W., Van Buren.
Dewey, Martin, Kansas City.
Eidmann, W. P., St. Louis.
Fisher, J. A., St. Louis.
Frankenthal, M. A., St. Louis.
Fulbright, C. H., St. James
Goebel, Arthur, St. Louis.
Hollis, L. T., Kansas City.
Jacobs, M. W., St. Louis.
Kennedy, W. U., St. Louis.
Kitchell, W. E., St. Clair.
Manko, Emanuel, Kansas City.
McMurtrey, A. T. Salem.
McNees, A. J., Clinton.
Millar, R. C. M., St. Louis.
Minor, J. C., Chillicothe.
Rassieur, Louis, St. Louis.
Reed, Elizabeth B., St. Louis.
Roberson, H. M., Kansas City.
Rusk, Elizabeth, St. Louis.
Russell, J. M., Monett.
Ruyle, H. J., Springfield.
Sounders, L. E., Stewartsville.
Schorer, E. H., Columbia.
Singleton, D. E., Shelbina.
Wallace, W. S., Excelsior Springs.
Waters, W. T., New London.
Williamson, W. H., Mokane.
White, C. A., St. Louis.

MONTANA.

Gates, L. A., Billings.
Potter, Peter, Butte.

NEBRASKA.

Bunce, A. C., Omaha.
Everett, O. W., Lincoln.
Farrell, Henry, Axtell.
Ginn, A. P., Nebraska.
Goldsberry, Craig.
King, H. E., Silver Creek.
Lindquest, A. B., Omaha.
Long, J. H., Garrison.
McCaw, F. W., Omaha.
Meriwether, C. N., Paulina.
Mick, W. H., Omaha.
Neely, J. M., Elmwood.
Rickard, E. T., Weeping Water.
Simon, Frank, Oakland.
Updegraff, E. J., Omaha.
Wood, M., Tekamah.

NEW HAMPSHIRE.

Carr, B. W., Pittsfield.

NEW JERSEY.

Beatty, E. E. B., Newton.
Donovan, A. Q., Elizabeth.
Finke, C. H., Jersey City.
Freile, Wm., Jersey City.
Lake, W. A., Erma.
Lyon, L. C., Magnolia.
Scott, E. A., Asbury Park.
Silk, C. I., Perth Amboy.
Vail, J. L., Cranford.

NEW MEXICO.

Peters, Le Roy S., Silver City.
Willson, H. G., Gallup.

NEW YORK.

Allen, W. B., New York City.
Andrews, B. F., Sonyea.
Bailey, Pearce, New York City.
Baldwin, Helen, New York City.
Bayliss, A. W., Buffalo.
Bock, F. W., Rochester.
Brinsmade, W. B., Brooklyn.
Brownell, W. H., Utica.
Bryant, J. D., Kingston.
Buerger, Leo, New York City.
Burns, J. E., Glen Cove.
Burstein, M. J., New York City.
Campbell, P. J., Utica.
Canna, R. R., Amsterdam.
Chapman, J. F., Katonah.
Chesebro, C. H., Unadilla Forks.
Cordner, Robt., Middletown.

Corning, Erastus, Albany.
Cornwell, B. W., Williamsville.
Costello, M. E., Branchport.
Curtis, J. G., New York City.
Davis, C. E., Mecklenburg.
Dennett, R. H., New York City.
Dutcher, Adelaida, Syracuse.
Eastmond, Charles, Brooklyn.
Feldstein, Samuel, New York City.
Ferguson, J. S., New York City.
Fleming, W. M., New York City.
Ford, R. W., Otego.
Fraser, Roderick, New York City.
Freeborn, G. C., New York City.
Fuchsius, J. H., New York City.
Garnsey, N. D., Kinderhook.
Gillette, Elizabeth Van R., Schenectady.
Goodfellow, E. H., Schenectady.
Groat, W. A., Syracuse.
Green, I. L., Watertown.
Greene, F. H., Poughkeepsie.
Groves, Oliver, Rochester.
Hackett, G. W., Ceres.
Hall, J. M., Staten Island.
Harris, B. S., Brooklyn.
Hatch, Edith R., Buffalo.
Hauswirth, Louis, New York City.
Helmer, R. D., Auburn.
Hiss, P. H., Jr., Brooklyn.
Hitchcock, P. L., Croton Falls.
Holcomb, H. V., New York City.
Huggins, W. Q., Sanborn.
Hughes, J. L., Mt. Vernon.
Huyck, R. P., Herkimer.
Hyde, C. J., Poughkeepsie.
Joachim, Henry, Brooklyn.
Janes, E. W., Hamburg.
Jennings, C. P., Macedon.
Jennings, F. S., Cortland.
Johnston, H. L., Binghamton.
King, D. F., New York City.
Kleeberg, Felix, New York City.
Knapp, C. N., Port Jervis.
Konther, A. F., Brooklyn.
La Porte, E. C., Amsterdam.
Leggett, Noel B., New York City.
Leonard, J. E., Hartford Mills.
Lewis, Henry, Argyle.
Linder, William, Brooklyn.
Lynch, J. B., New York City.
Lyon, E. D., Peekskill.
MacMinn, C. A., Schenectady.
Manning, C. E., Brooklyn.
Mark, Alexander, Elmira.
Markle, F. G., Bangor.
Mayer, Abraham, New York City.
McMenamin, T. D., Highland Falls.
Mills, T. D., Middleton.
Moffit, A. R., Poughkeepsie.
Moore, R. G., New York City.
Mulcahy, W. L., New York City.
Myers, A. Y., Buskirk Bridge.
Northridge, W. A., Brooklyn.
O'Hanlon, George, Kings Park.
O'Leary, W. J., Kingston.
Page, Agnes E., Albany.
Pannacl, C. E. E., Gloversville.
Peters, J. B., Walden.
Phillips, H. C., Rochester.
Prendergast, F. A., Brooklyn.
Reid, M. S., Coeymans.
Reifenstein, E. C., Syracuse.
Rimer, E. S., Staten Island.
Rivenburgh, W. T., Middleburg.
Rodenhurst, D. C., Philadelphia.
Rodman, Harry, New York City.
Rubenstein, Jacob L., New York City.
Schuyler, A. H., Rochester.
Seccomb, M. L., Ira.
Shetterly, W. R., Brooklyn.
Skinner, C. N., Port Jervis.
Smith, E. J., Larchmont.
Snow, L. D., Weedsport.
Sour, Bernard, New York City.
Stanton, E. M., Schenectady.
Stewart, O. K., Canisteo.
Strouse, A. N., New York City.
Suits, P. T., Tribes Hill.
Sutton, M. B. E., New Rochelle.
Swain, F. S., Corning.
Thompson, G. S., Brooklyn.
Thornton, M. Frances, New York City.
Teed, E. L., Lisle.
Todd, J. B., Syracuse.
Todd, J. F., Brooklyn.
Towlerton, C. H., Lyons.
Trader, W. N., Jr., Sonyea.
Trego, T. M., Albany.
Trimble, W. B., New York City.
Turrell, G. H., New York City.
Van Patten, P. S., Mt. Vernon.
Van Santvoord, R., New York City.
Waller, N. B., New York City.
Walser, C. W., New Brighton.
Waterman, L. G., Buffalo.
Waters, B. H., New York City.
Weaver, F. B., New York City.
Wilton, W. H., Brooklyn.
Wiley, C. F., Syracuse.
Wollheim, J. L., New York City.
Wren, A. A., New York City.
Wright, J. S., Perry.
Wolf, G., New York City.
Zabriskie, Glen Cove, L. I.

NORTH CAROLINA.

Akerman, J. A., Wilmington.
Bellamy, R. H., Wilmington.
Nichols, A. A., Painter.

NORTH DAKOTA.

Callander, C. N., Fargo.
Mulligan, Thomas, Grand Forks.

OHIO.

Alexander, H. B., Dayton.
Baker, C. L., Kirkpatrick.
Bausman, C. W., Bradford.
Bayliff, J. E., Uniopolis.
Beach, J. W. H., Arlington.
Berry, W. H., Middlepoint.
Bennett, G. U., Cleveland.
Bennett, H. C., Lima.
Berlin, C. C., Wapakoneta.
Bice, A. W., Lima.
Boerstler, G. W., Lancaster.
Boesger, M. A., Cleveland.
Bolt, R. A., Cleveland.
Bone, P. S., Royalton.
Booth, G. B., Toledo.
Borden, W. E., Tedrow.
Bowser, M. S., Lima.
Bretz, I. S., Cleveland.
Brickley, D. W., Canal Winchester.
Brown, R. A., Commercial Pt.
Budwig, Maurice, Cleveland.
Clemons, J. G., Georgetown.
Cobbs, A. R., Damascus.
Conley, C. W., Eaton.
Cook, J. M. C., Weston.
Courtright, J. L., Cincinnati.
Crum, E. C., Dayton.
Dahlenburg, C. W., Toledo.
Dawson, R. W., E. Liverpool.
Duckwall, F. A., Dayton.
Duckwall, F. C., Scott.
Espey, P. D., Port William.
Fast, L. R., Pauliding.
Fayen, Emmett, Cincinnati.
Ferneau, F. D., Toledo.
Fisher, V. L., Mt. Vernon.
Fledderjohann, F. F., New Bremen.
Gaston, E. M., West Union.
Hamilton, N. A., Franklin.
Harrison, J. M., Toledo.
Hatfield, C. C., Kingston.
Held, W. A., West Unity.
Herrick, H. J., Cleveland.
Herrmann, A. A., Newark.
Higbie, J. L., Jenera.
Hunter, J. S., Jackson.
Ingersoll, J. M., Cleveland.
Ireland, S. A., Washington C. H.
Justice, C. R., Poland.
Klepinger, L. G., Dayton.
Knight, A. W., Attica.
Lawless, R. E., Toledo.
Leahy, Maurice, Tiffin.
Lickly, I. M., Lima.
Lindersmith, H. C., Sherwood.
Lorimer, H. F., Chillicothe.
Marshall, W. A., Wharton.
Martz, G. J., Hollandsburg.
Mattern, J. H., Unionport.
McLaughlin, R. B., Mt. Liberty.
McMurray, J. A., Marion.
Mecklem, W. S., Mansfield.
Meggenhofen, Edward, Chillicothe.
Mondhank, R. W., Lancaster.
Morton, F. J., Cleveland.
Nachtegan, B. J. A., Cleveland.
Newcomb, R. B., Cleveland.
Ochs, K. E., Cleveland.
Osburn, C. W., Norwood.
Overly, J. E., Columbus.
Pay, W. C., Bellefontaine.
Porter, E. H., Tiffin.
Perry, F. E., Jefferson.
Phillips, D. T., Morristown.
Piattfaut, W., Dayton.
Ray, E. S., Hamden Junction.
Rogers, J. E., Peebles.
Root, R. R., Youngstown.
Rudy, A. S., Lima.
Ryall, W. W., Youngstown.
Sallume, S. N., Salem.
Samson, H. M., Lancaster.
Sanford, H. L., Cleveland.
Scott, B. B., Mt. Vernon.
Shaffer, J. W., Youngstown.
Shollenbarger, W. L., Cincinnati.
Sill, R. H., Cleveland.
Smith, G. J., Niles.
Smith, J. M., Dunbridge.
Smith, W. S., Dayton.
Snively, G. W., West Lebanon.
Snyder, E. H., Cleveland.
Spangler, M. H., Alger.
Stayner, I. C., Spencerville.
Steiner, O. B., Lima.
Stemen, H. G., Delphos.
Stoll, J. H., Wooster.
Stotter, H. B., Cleveland.
Teter, C. K., Cleveland.
Theis, H. H., Youngstown.
Thomas, Arthur, Minerva.
Thomas, G. F., Cleveland.
Thomas, H. G., Greenville.
Thomas, T. R., Lima.
Thorne, H., Dayton.
Tidd, E. W., Stockdale.
Tinker, L. M., Frankfort.
Tobias, E. H., Bowling Green.
Todd, C. D., McComb.
Todhunter, E. F., Washington C. H.
Trump, J. F., Hamilton.
Waugh, J. M., Cleveland.
Webster, H. H., Cleveland.
Welker, A. D., Gambier.
West, W. L., New Matamoras.
White, J. M., Ironton.
Wills, J. W., Richmond Dale.
Wilson, J. B., Scott.
Wilson, M. E., Bettsville.
Wolfenstein, Leo, Cleveland.
Woodlin, W. J., Columbus.
Workman, I. S., Gambier.

OKLAHOMA.

Allison, T. P., Westville.
Buffo, Umberto, Krebs.
Ewing, F. W., Terral.
Garland, H. S., Sapulpa.
Hatfield, W. M., Mulhall.
Jester, J. A., Foss.
Landrum, S. H., Olustee.
Renegar, J. F., Wapanucka.
Womack, Jesse L., Moore.

PENNSYLVANIA.

Altman, O. R., Uniontown.
Ambrose, C. D., Ligonier.
Apgar, C. S., Pittsburg.
Baker, W. C., Hummelstown.
Berry, E. S., Shippensburg.
Bernd, L. H., Philadelphia.
Boak, R. G., New Castle.
Boyer, G. H., Allentown.
Bradshaw, G. M. B., Sugar Grove.
Brady, R. W., Honesdale.
Brooks, A. C., Wilkesbarre.
Broslus, P. F., Hazleton.
Burt, J. C., Pittsburg.
Cass, C. D. Philadelphia.
Craighead, Nancy B., Pittsburg.
Cooke, E. S., Philadelphia.
Corson, C. G., Rileyville.
Davies, J. R. Forksville.
DeBashore, Simeon, Palmyra.
Denny, C. B., Noblestown.
Dissler, H. S., Denver.
Dukes, J. L., Philadelphia.
Engle, W. D., Aliquippa.
Fitzsimmons, T. C., Carbondale.
Fogel, S. C. B., Allentown.
Gensburg, Nate, Philadelphia.
Goodstone, M. A., Pittsburg.
Greer, R. B., Butler.
Haines, F. G., Warren.
Hawman, E. G., Reading.
Hibbs, S. E., Fairchance.
Hiller, H. M., Chester.
Hindman, A. O., Cross Creek.
Hoffman, Edward, Montandon.
Horn, C. T., Lehighton.
Humphrey, W. J., Union City.
Hutchison, D. E., E. Downingtown.
Hyer, I. G., Clarendon.
Johnson, W. H., Dudley.
King, H. B., Reynoldsville.
Kneedler, G. C., N. S. Pittsburg.
Lecates, C. A., Philadelphia.
Lowry, R. S., Markleton.
Lyle, J. W., Houston.
McLain, P. J., Ridgway.
Meyers, H. P., Markleysburg.
Nonamaker, N. S., Bedminster.
Parsons, J. W., Canton.
Phillips, Bert L., Nelson.
Poulson, W. C. T., Philadelphia.
Ralston, J. H., Harmony.
Ralston, S. E., Zelienople.
Reemsnyder, B. J., Ephrata.
Rimer, J. T. R., Clarion.
Rodgers, W. H., Pittsburg.
Rodman, G. L., Hawley.
Ross, C. C., Clarion.
Sayers, J. C., Reynoldsville.
Sebring, J., Jr., Bellefontaine.
Shaffer, H. A., Williamstown.
Sohn, Charles, Pittsburg.
Stewart, A. H., Marion Center.
Stewart, F. S., Philadelphia.
Sutton, M. A., Avonmore.
Urey, F. F., New Castle.
Wagner, F. M., Wampum.
Ward, F. E., Berwick.
Young, C. M., Adrian.
Young, R. J., Snow Shoe.

SOUTH DAKOTA.

Hoagland, C. C., Veblen.
Pherrin, O. D., Stickney.
Sherwood, H. W., Doland.
Smiley, T. B., Mt. Vernon.

TENNESSEE.

Cox, J. W., Johnson City.
Massey, J. F., Knoxville.
Noel, L. G., Nashville.
Russell, W. B., Nashville.

TEXAS.

Alexander, R. L., Coahoma.
Auerbach, L. B., El Paso.
Clemons, I. T., Waller.
Clune, W. M., Darwin.
Cook, W. G., Ft. Worth.
Hackney, U. P., Dallas.
Ledbetter, E. E., Tioga.
Maxfield, J. R., Grand Salem.
Miller, K. M., Houston.
Mohlau, F. G., Brenham.
Rush, J. W., Corinth.
Stone, M. P., Dallas.
White, David, Hamlin.
White, F. A., Sulphur Bluff.

UTAH.

Beatty, T. B., Salt Lake City.

VERMONT.

Derven, J. J., Poultney.

VIRGINIA.

Barham, W. B., Newsoms.
Brown, A. G., Richmond.
Ferguson, R. T., Richmond.
Hill, Emory, Scottsville.
Southall, P. T., Amelia.
Tankard, J. W., Lilian.

WASHINGTON.

Brazean, S. D., Asotin.
Dean, H. Z., Reardan.
Fick, E. P., Seattle.
Huntley, Mary M., Olympia.
von Phul, P. V., Seattle.
Waugh, F. P., Wapato.
Wendt, S. M., Castle Rock.

WEST VIRGINIA.

Aultz, L. L., Charleston.
Bigony, H. F., Hinton.
Casey, M. R., Roanoke.
Copeland, C. E., Charleston.
Eakin, B. W., Carlisle.
English, J. W., McDowell.
Furlong, J. C., Weaver.
Kelly, M. B., Wheeling.
Lemon, C. W., Claremont.
McGuire, T. J., Parkersburg.
Palmer, W. N., Hinton.
Parks, C. L., Atwood.
Rudasill, D. J., Kingwood.
Smith, F. W., Bluefield.
Strickler, E. W., Kingwood.
Yost, L. N., Fairmont.

WISCONSIN.

Ankenbrandt, A. A., Mattoon.
Baer, C. A., Milwaukee.
Bergh, Christian, Whitehall.
Chipman, H. A., Stoughton.
Conroy, J. M., Milwaukee.
Craig, S. S., East Troy.
Dean, Joseph, Madison.
Eagan, J. B., Excelsior.
Eastman, J. R., Kenosha.
Elliott, S. T., Richland Center.
Frey, G. R., Burlington.
Hansen, O. L., Argyle.
Herriman, L. L., Boyceville.
Hogue, G. I., Milwaukee.
Houck, Mary P., La Crosse.
Kerr, A. N., Martell.
Kleinhans, M. A., Milwaukee.
Mason, E. L., Eau Claire.
McCallin, A. E., Wautoma.
Meyers, J. M., Odanah.
Monk, R. W., Lamartine.
Munn, W. A., Janesville.
Pogue, Mary E., Lake Geneva.
Reinhard, H. A., Milwaukee.
Riddle, Julia, Oshkosh.
Rudolf, S. F., Ellsworth.
Russell, Rose A., Neenah.
Schell, Ida L., Milwaukee.
Schroeder, H. F., Marinette.
Schuster, B. L., Milwaukee.
Thayer, F. A., Beloit.
Waters, H. F., Nekoosa.
Wood, F. C., Westfield.

WYOMING.

Keller, I. P., Sheridan.
Monahan, J. J., Encampment.
Steffen, W. A., Sheridan.

PHILIPPINES.

Ruediger, E. H., Manila.

PROCEEDINGS OF THE CHICAGO SESSION.

MINUTES OF THE FIFTY-NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT CHICAGO, JUNE 2-5, 1908.

House of Delegates

(*Continued from page 1927.*)

Third Meeting—Tuesday Afternoon, June 2

The House of Delegates met at 2 p. m. and was called to order by President H. L. Burrell. The Secretary called the roll and 67 delegates responded.

Dr. H. Bert Ellis, chairman, presented a supplementary report of the Committee on Credentials.

The minutes of the previous meeting were read and approved.

Report of the Reference Committee on Medical Education.

Under the head of Reports of Reference Committees, Dr. H. D. Arnold, Massachusetts, chairman, read the report of the Reference Committee on Medical Education, as follows:

Your committee wishes to extend to the Council on Medical Education its congratulations on the continued excellence of the work done in securing improved conditions of medical education. The work of the past year has been a continuance of and a development of the lines of work which have accomplished so much for this cause in the past few years. During the past year there has been a gratifying increase in the number of schools which have adopted an advanced standard for admission, and other schools have shown a desire to do this as soon as the local conditions will permit. The statistics published by the Council show an improvement in medical education all along the line, as evidenced by the results of the state board examinations.

The committee recommends the continuance of the campaign of publicity, the continuance of efforts to persuade more schools to adopt the higher standards for admission, and wishes the Council further success in the line of getting medical schools to unite for more effective educational work.

FRANK BILLINGS, VICTOR C. VAUGHAN,
A. VANDER VEER, HORACE D. ARNOLD,
ARTHUR D. BEVAN, Chairman.

On motion by Dr. Frank Billings, Illinois, seconded by several delegates, the report was adopted.

Report of Reference Committee on Reports of Officers.

Dr. Wisner R. Townsend, New York, chairman, presented the following report of the Reference Committee on Reports of Officers:

To the House of Delegates of the American Medical Association:

The Reference Committee on Reports of Officers appointed by the President, June 1, respectfully presents the following:

REPORT OF THE PRESIDENT.

1. The Committee recommends that all suggestions in the President's report, relating to matters contained in the present Constitution and By-Laws, be referred to a special committee of three, whose duties shall be to make a complete revision of the present Constitution and By-Laws, and present the same at the next annual session of the Association.

2. The Committee recommends the adoption of the following resolutions by the Association:

Resolved, That the Association approves of the recommendations of the President, relating to the teaching of the principles of moral philosophy as applied to medicine, and would respectfully advise that the measure be carried into effect at the earliest practical moment in institutions devoted to the purposes of medical education.

TEACHING OF MEDICAL ETHICS.

3. The following action is recommended:

Resolved, That a committee of five be appointed to take into consideration the elaboration of "The Principles of Ethics of the American Medical Association" next year.

Resolved, That said committee report all proffered suggestions on the subject for the consideration and action of the House of Delegates at the next annual session.

ANIMAL EXPERIMENTATION.

4. The following action is recommended:

WHEREAS, From time to time, attempts, fostered largely by erroneous statements and accusations and false sentiment and prejudice, are made in some parts of this country to enact specific legislation, prescribing the conditions under which experiments on animals may or may not be performed; be it,

A. Resolved, by the American Medical Association, That animal experimentation has been of incalculable benefit to science and art, the progress of which is as absolutely dependent on experimental methods as are all the physical and natural sciences.

B. Resolved, That no abuse of the practice of animal experimentation in this country has been shown to exist to warrant specific legislation, nor is there any probability of such abuse arising.

C. Resolved, by the American Medical Association, That the unrestricted performance by proper persons of scientific experiments on living animals is essential to the maintenance and progress of medicine and biology.

CONSERVATION OF NATURAL RESOURCES OF THE COUNTRY.

5. In response to the invitation by the President of the United States to the American Medical Association to participate in the meeting held in Washington to consider the conservation of the natural resources of the United States, the adoption of the following resolution is recommended:

Resolved, That the members of the American Medical Association, in regular session assembled, do hereby express their high appreciation of the invitation to aid in the conservation of the natural resources of the country, and would gladly cooperate in this, and in other measures, which make for improvement in the health and welfare of the people in this land.

REPORT OF THE SECRETARY.

The committee recommends the adoption of the following resolution:

Resolved, That a committee of three be appointed to consider the question of uniform regulations regarding membership, and that this committee endeavor to make arrangements with the different state organizations so that uniformity shall exist among all the states and the national organization in this important subject.

REPORT OF BOARD OF TRUSTEES.

Your committee would recommend that all the matter contained in the report of the Board of Trustees (see THE JOURNAL, May 23, page 1732), beginning with the words "Your Board of Trustees feels that the time," and ending with the words "putting the matter into the hands of the different state associations" be stricken out, and that other changes be made in the same paragraph so that it may read as follows:

NATIONAL ORGANIZER.

The American Medical Association will ever owe Dr. J. N. McCormack a debt of gratitude for the great work which he has done in his special department. In accord with the recommendation of the House of Delegates made at Atlantic City, June 6, 1907, the Board of Trustees arranged with Dr. McCormack to enter vigorously on the work therein suggested. It is believed that his time can be profitably employed, in addition to his duty as organizer, in presenting pure food matters, and the need of uniform state laws governing the practice of medicine before the legislatures of the different states, and as an educator of the public in matters medical, as he has been chiefly doing this year; and it is recommended that he be requested to continue the work.

COOPERATION OF TREASURY DEPARTMENT.

Your committee recommends that the report of the committee appointed to secure cooperation of the U. S. Treasury Department with the Council on Pharmacy and Chemistry be published with the annual report of the Trustees.

SECOND EDITION OF DIRECTORY APPROVED.

Your committee would also recommend the following:

Resolved, That the action of the Board of Trustees in making preparations for the second issuance of the Directory be endorsed by the House of Delegates.

REPORT OF THE CHAIRMAN OF COMMITTEE ON ORGANIZATION.

In regard to this report it is respectfully recommended:

1. That the postgraduate work be continued and that the Trustees be requested to appropriate for the same such funds as in their discretion can be profitably employed for that purpose.

2. That such portion of Dr. McCormack's address as relates to the teaching of medical economics in schools of medicine be referred to the Council on Medical Education for their consideration.

3. The committee sincerely regrets the decision of Dr. McCormack to retire from official work which he has so ably and efficiently performed and expresses the hope that his determination in this respect may not be final.

In conclusion, the committee desires to express its appreciation of the good and faithful work done by the officers and committees during the past year.

Respectfully submitted,

W. T. WILLIAMSON, Secretary.
FRANK PASCHAL.
DONALD CAMPBELL.
W. T. SARLES.
WISNER R. TOWNSEND, Chairman.

The report was first read as a whole, and then voted on section by section.

Section 1 was read, after which Dr. Alexander R. Craig, Pennsylvania, moved that this section be referred to the Reference Committee on Constitution and By-Laws rather than to a special committee of three as set forth in the report, which motion was seconded by Dr. Charles S. Bacon, Illinois, and carried, and the section was so referred.

Sections 2, 3, 4 and 5 were read and adopted. The sections relating to the reports of the Secretary, Board of Trustees and of the Committee on Organization were read and adopted, after which Dr. H. Bert Ellis, California, moved that the report of the committee be adopted as a whole, which was seconded and carried.

Council on Research Defense.

Dr. Wisner R. Townsend, New York, offered the following resolution:

Resolved, That a Council on Defense of Medical Research be created, to consist of not less than seven members, these to be appointed by the President of the Association, and that the Board of Trustees be requested to appropriate the necessary funds and to arrange for the printing, collection and distribution of appropriate literature, and such other details as may be needed to make effective the work of this Council.

Dr. Philip Mills Jones, California, moved that the resolution be referred to the Board of Trustees, as it involved the expenditure of money. Seconded.

Dr. Frank Billings, Illinois, moved to amend that the House of Delegates endorse most heartily the resolution and recommend the Board of Trustees to establish such a committee.

The amendment was seconded, accepted, and the original motion as amended was carried.

Resolutions on Organization.

Dr. W. H. Sanders, Alabama, made the following remarks and introduced a resolution which was referred to the Reference Committee on Legislation and Political Action:

Mr. President:—I give notice that it is my intention to submit a motion, but before doing so I ask the privilege of making some prefatory remarks.

Medical organization in this country has for more than half a century been undergoing evolution. For many years progress was slow, but always perceptible and steady. In recent years, however, the movement forward has been rapid, and, not only so, the scope of achievement to be wrought out has been immensely broadened. The constitutions, or organic laws, of the different divisions of the great army of organized medical men in this country—county, state and national—should keep pace with the new ideas evolved and with the ever-widening field of work. The goals of a few years ago have been achieved and new fields for conquest now inspire medical men with fresh enthusiasm and courage. Witness the marshaling of forces everywhere to make a simultaneous and combined attack on the great white plague, as on every other enemy to human life!

It behooves us, therefore, to broaden our systems of organization so as to have them endowed with public health functions, as well as scientific functions. Heretofore, the rule in organization has not been to make one and the same body of medical men both a public health and scientific one. No good reason exists why these two functions may not be combined. They have been combined in my state (Alabama) for thirty years, or thereabout, and experience has abundantly justified the union.

The time is ripe, therefore, for a reconsideration of the organic laws or constitutions under which many bodies of medical men are working. This reconsideration should apply to the Constitution and By-Laws of this Association, and to the form of constitution formulated for state organizations. It might even be extended to, and include, the draft of a constitution for county societies. In this way a correlated and coherent system of organization might be brought about in counties and states, all culminating in this as a national body, and all endowed with the legal right to act as public health bodies. Think of what might be accomplished in behalf of sick and suffering humanity were every organized body of medical men authorized to formulate the public health policy to be pursued in the territory over which it presides, and then to supervise the execution of the same!

Special reasons exist why the organization should be reconsidered. All agree, I take it, that a charter from the general government is desirable, if one can be obtained. This question was investigated, more or less, several years ago, with the result, I believe, of securing contrary opinions.

In support of the view that the general government could grant such a charter, I offer the opinion of Senator Morgan of my state, now deceased, than whom no man in the nation ranked higher as a constitutional lawyer. Several years ago, he expressed the unqualified opinion to me that the government could grant a charter to this Association which would carry with it the right of transacting business anywhere in the United States. Whether this be true or not can certainly be ascertained; if in no other way than by having a bill to that effect introduced into Congress. Such a bill would be referred to the judiciary committees of the two houses, the verdict of which bodies would definitely settle the question.

If a national charter can not be obtained the next thing would be to obtain the best possible form of state charter.

The form in which the Articles of Incorporation of this Association exist at present—filed in this state—could, with all due deference, be changed with advantage. The articles are practically identical with the Constitution, consequently whenever an amendment to the Constitution is made, a corresponding change in the articles of incorporation must be made. This could be obviated by drawing up articles of incorporation setting forth in a geenral way the rights and powers of the Association, and filing them, after which the Constitution could be amended in such way as might be deemed desirable without disturbing the articles of incorporation; provided that the amendment did not violate in any way the articles, or, better still, a formal charter might be obtained from the legislature of this or some other state.

Further and very strong reasons might be assigned for a reconsideration and reconstruction of the Constitution of this Association.

Take Article 7 therein, for instance, which reads as follows:

The House of Delegates may create such branch organizations as may be deemed essential to promote the welfare of the medical profession.

For indefiniteness this article is certainly open to criticism. Just ten questions must be asked and answered before one could decide whether he favors the article or not.

They are: What kind of branch organizations are meant? How shall they be created by the House of Delegates? What relations shall they sustain to the present body? What to one another? What rights shall they have? What duties shall they perform? What responsibilities shall be imposed on them? What dues shall they pay? What is meant by the "welfare of the profession?" Is it the material, moral, or scientific welfare that is to be promoted? What good will be accomplished by creating branch organizations?

One of the unwritten laws in constitution writing is that the words in which such instruments are formulated must furnish their own interpretation and not need outside explanation. An unfortunate failure on this point in the great organic law of the land cost this country the greatest and most lavish expenditure of blood and treasure in the history of the world. Without waiting to have the ten questions in regard to branch organizations answered, the bad wisdom of Article 7 was apparent to me when it first appeared in the Constitution, and as time goes on, that conviction grows stronger and stronger.

In a logical and coherent system of medical organization in

this country the only official bodies should be county, state and national. Any member of the profession can find in these three fields ample opportunity for all of the scientific and public health work he can find leisure to do.

Possibly in the large cities justification for other organizations may exist, but the three mentioned should be the only ones to which official recognition should be accorded.

Did time permit, objections to other parts of our present Constitution and By-Laws might be alleged, but without stopping to call attention to them, I move that a committee of five be appointed by the President, the appointment to be announced at any time within one month, whose duty it shall be:

1. To ascertain as definitely as can be whether a charter for this Association can be obtained from the Congress of the United States which would confer the right of transacting business at any place where a meeting may be held.

2. Should it appear that such a charter can not be obtained, to prepare a broad and comprehensive statement of the principles of organization that should prevail in this Association, together with the objects to be achieved; such statement, on the approval of this body, to be used either as articles of incorporation under state authority, or to secure a formal charter under state authority.

3. To reconstruct the present Constitution and By-Laws of this body, so as to bring them up to the broadest and highest standard in the evolutionary development of the principles and objects of medical organization.

4. To reconsider the form of Constitution submitted for adoption by state organizations and to suggest such changes therein as present developments may seem to render wise and expedient.

5. To formulate a plan of organization and constitution for county societies, with the view of aiding them in so far as their varying conditions will render the adoption of such plan and constitution feasible.

The object is, Mr. President, for the proposed committee to study all of these questions broadly and at the same time analytically, so as to evolve the best thought and lines of action of which these subjects are susceptible. Under such organic laws as may be formulated, the medical men of this country might be marshaled as a loyal, coherent, and invincible army in the battle with disease.

I need hardly say that the committee, if appointed, is to be entirely without power, except to study maturely and comprehensively the questions referred to it, and to bring the results of that study before this body for such action thereon as it may deem wise and proper. Such study can do no harm, and may do great good.

I am aware, Mr. President and Gentlemen, that I have taxed your patience, but my apology for the time consumed is that I can conceive of no subject more worthy of your thought and consideration than the one I have endeavored to present.

Amendments to By-Laws Introduced.

Dr. H. Bert Ellis, California, presented the following amendments to the By-laws:

Amend Section 1, Chapter VII, Book 2, Page 13, of the By-Laws by cutting out all after the words "Board of Trustees," striking out the following, "and the orator shall be nominated, respectively, by the Sections on Practice of Medicine, on Surgery and Anatomy, and on Hygiene and Sanitary Science."

Strike out Section 5, Chapter VII, Book 2, Page 14, of the By-Laws entire and make Section 6, Section 5 and Section 7, Section 6.

Amend Section 1, Chapter XI, Book 4, Page 25, of the By-Laws to read as follows: "Section 1.—Time of General Meeting.—The General Meeting shall be held at 10:30 a. m. on the first day of the annual session and shall be presided over by the President, or, in his absence or at his request, by one of the Vice-Presidents."

Amend Section 2, Chapter XI, Book 4, Page 25, of the By-Laws by striking out the word "opening" in the second line and by striking out everything after the word "action" in the fourth line, making the section read as follows: "Section 2.—Addresses at the General Meeting.—Before the General Meeting shall be delivered the address by the President, whose recommendations shall thereon go to the House of Delegates for action."

Amend Section 3, Chapter XI, Book 4, Page 25, of the By-Laws by striking out the words "first or opening" in the second line of the paragraph.

Amend Section 3, Chapter XII, Book 4, Page 27, of the By-Laws so that the last sentence of the section shall read as follows: "The Sections on Practice of Medicine, on Surgery and Anatomy and on Hygiene and Sanitary Science, may each elect one of their members to deliver at the ensuing annual session the Oration on Practice of Medicine, the Oration on Surgery and the Oration on State Medicine."

The above amendments were referred to the Reference Committee on Constitution and By-Laws.

Petition from Chicago Medical Examiners' Association.

Dr. Philip Mills Jones, California, presented the following petition from the Chicago Medical Examiners' Association, which was referred to the Reference Committee on Sections and Section Work:

To the House of Delegates of the American Medical Association:

You are respectfully petitioned to form, in accordance with Article 6 of the Constitution, a section of the Association to be devoted to the science and art of diagnosis. The spirit of modern medicine being the prevention of disease, an essential requisite, therefore, is the determination of the normal as well as the pathologic human constitution. A large number of the members of this Association are, by virtue of their positions as medical examiners for insurance companies, for the army and the navy, for pension applications, for athletic clubs, etc., engaged in the study and practice of diagnosis from the standpoint of the normal man. As such they have created vast professional and financial interests and have developed a field of work with special methods, statistics and results. They feel that they deserve and ought to have the recognition of this Association, thereby enhancing the dignity of their work by the stamp of its approval and safeguarding their medical and material interests by its powerful protection. They believe that the creation of the section prayed for will contribute to the attainment of the noble objects of the Association, as laid down in Article 2 of the Constitution. Relying on the fraternal spirit which makes the interests of workers in every section of medicine the concern of all, they confidently submit their petition to your consideration.

THE CHICAGO MEDICAL EXAMINERS' ASSOCIATION.

By DR. DAVID DOHERTY, President, and DR. GLENN WOOD, Secretary.

Report of Reference Committee on Amendments to Constitution and By-Laws.

Dr. George W. Guthrie, Pennsylvania, chairman, presented the following report of the Reference Committee on Amendments to the Constitution and By-laws:

1. Amendment to Section 1, Article 5, page 2 of the Constitution: "Ex-Presidents of this Association shall also be members of the House of Delegates." And also substitute: "Ex-Presidents of this Association and the Trustees shall be members of the House of Delegates without the right to vote."

On both the amendment and the substitute the committee reports adversely.

2. On proposed amendment to the By-laws, Book 1, Chapter 3, page 8, "retired members:" "Anyone who has been a member in good standing of the American Medical Association for twenty years, and who has been placed on the retired list of his state association, shall, on his request, be placed by the Secretary of the American Medical Association on the retired list of the members of this Association. Retired member shall be exempt from the payment of dues."

On this proposed amendment the committee also reports adversely.

3. On the proposed amendment, Section 5, Chapter 10, Book 3, page 20, of the By-laws, substituting the word "legislative" for "congressional" the committee reports favorably.

C. E. CANTRELL,
G. L. TANEYHILL,
C. H. COOK,
G. L. STRADER,
G. W. GUTHRIE, Chairman.

Dr. Philip Mills Jones, California, moved the adoption of the report with the recommendation of the Committee.

Seconded and carried.

Resolutions on Patent Laws.

Dr. Charles S. Bacon, Illinois, introduced the following preambles and resolution by request:

WHEREAS, The object of the patent laws is to promote progress in science and useful arts; and

WHEREAS, The application of the United States patent law to materia medica inventions and discoveries is a hindrance to progress in therapeutics, because patents on products are allowed, thus creating monopoly and preventing progress and improvement in the art; and

WHEREAS, Foreign countries, including Germany, France, Austria-Hungary, Italy, Japan, Argentina, etc., prohibit the patenting of materia medica products; and

WHEREAS, A patent on a product creates a monopoly not only on the product itself, but on all subsequent improvements in processes for making the same, thereby destroying the stimulus for improvement and discovery through research; and

WHEREAS, The registration of the name of medicines as trademarks creates and fosters monopolies, protects secrecy and fraud, causes confusion in pharmaceutical nomenclature, and enables the manufacturers of nostrums to build up a dishonest commercial business in drugs by misleading advertisements, to the injury of the public health; therefore, be it

Resolved, That a committee of five be appointed by the House of Delegates to work with the Council on Pharmacy and Chemistry and committtees of other societies created for a like purpose to study the whole question and cooperate with the Committee on

Medical Legislation in preparing and securing the enactment of a bill which shall secure such modification of the patent and trademark laws as will correct the abuses stated in these resolutions.

On motion, these preambles and resolution were referred to the Reference Committee on Legislation and Political Action.

Report of the Committee on Scientific Exhibit.

Dr. F. B. Wynn, chairman, presented a preliminary report from the Committee on Scientific Exhibit, as follows:

In response to the action of the House of Delegates at the last session, the Committee on Scientific Exhibit has prepared and herewith submits:

1. *Certificates of Honor* to be awarded meritorious exhibitors. These are embellished with photogravures respectively of Harvey, Pasteur, Virchow and Davis; three standing for scientific medicine in France, Germany and England; the fourth for the Association and American medicine. These certificates are to be engrossed later with the names of persons or laboratories to whom the awards are made.

2. *Gold Medals:*—One for the best compact but comprehensive tuberculosis exhibit; another for the best research exhibit. The question of whether or not awards of the medals be made, should depend on the merits of the exhibits, this fact to be determined by the committee on awards.

It is recommended that a committee on awards be appointed by the President of the Association; that said committee meet to pass on exhibits not later than Wednesday noon.

It is recommended that the usual $500 be appropriated for expenses of the Scientific Exhibit, and $100 for medals to be offered for such particular exhibits as the Committee on Scientific Exhibit may deem best.

Respectfully submitted,
E. R. LE COUNT,
W. M. L. COPLIN,
FRANK B. WYNN, Chairman.
Committee on Scientific Exhibit.

Committee on Awards Appointed.

Dr. C. E. Cantrell, Texas, moved the appointment of a committee of three on awards, as called for in the report, which was seconded by Dr. Arthur T. McCormack, Kentucky, and carried.

The President appointed as a Committee on Awards of Scientific Exhibit Drs. W. M. L. Coplin, Philadelphia; George Dock, Ann Arbor, and George W. Crile, Cleveland.

It was then moved that the preliminary report of the Committee on Scientific Exhibit be adopted. Seconded.

Dr. Alexander R. Craig, Pennsylvania, moved to amend that part of the report with reference to appropriation of money be referred to the Board of Trustees with the recommendation that the amounts specified be appropriated.

The amendment was seconded, accepted, and the original motion as amended was carried.

Report of Committee on Davis Memorial.

Dr. Henry O. Marcy, chairman, presented a supplementary report of the Committee on N. S. Davis Memorial, stating the amounts of money that had already been received, and suggested that if the Board of Trustees would appropriate $5,000 for this Memorial, state societies would follow. On motion of Dr. Charles S. Bacon, Illinois, the report was referred to the Reference Committee on Miscellaneous Business.

Resolution on Army Dental Corps.

Dr. A. Vander Veer, New York, offered the following preamble and resolution:

WHEREAS, The value of the services of the Dental Corps in the Army is now thoroughly recognized.

Resolved, That the Committee on Medical Legislation be instructed to further such legislation as will place the Dental Corps in the Army on a commissioned basis, such legislation to meet the approval of the War Department.

On motion, the preamble and resolution were referred to the Reference Committee on Legislation and Political Action.

Resolutions on State Journal Advertising.

Dr. Arthur T. McCormack, Kentucky, presented the following resolutions:

Resolved, That this Association heartily approves the action of the Board of Trustees in restricting advertisements of medical preparations to those approved by the Council on Pharmacy and Chemistry; and, further,

Resolved, That this House of Delegates requests all those state associations which now do or hereafter may publish or control medical journals to restrict their advertisements to such approved preparations, and that the General Secretary be requested to bring this resolution to the attention of all of the state associations.

On motion, the resolutions were referred to the Reference Committee on Miscellaneous Business.

Dr. McCormack's Work Endorsed.

Dr. Frank Billings, Illinois, offered the following:

Resolved, That the House of Delegates fully and heartily endorses the work of Dr. J. N. McCormack and recommends the Board of Trustees to continue him in the same capacity for another year.

The resolution was seconded by several delegates and was carried unanimously.

On motion, the House of Delegates adjourned until 2 p. m. on Wednesday.

Fourth Meeting — Wednesday, June 3

The House of Delegates met at 2 p. m. and was called to order by the President.

The roll was called, and 52 members responded.

The minutes of the previous meeting were read and adopted.

Report of Reference Committee on Sections and Section Work.

Dr. Julius Bierwirth, New York, member of the Reference Committee on Sections and Section Work, stated that the Committee had considered the petition referred to it to organize a section to be devoted to the science and art of diagnosis, and that the Committee respectfully reported adversely on this request.

On motion the report of the committee was adopted.

Report of Reference Committee on Legislation and Political Action.

Dr. Charles S. Bacon, Illinois, chairman, presented the following report of the Reference Committee on Legislation and Political Action:

To this committee has been referred the report of the standing committee on medical legislation, and several resolutions.

1. Under the head of national legislation, the standing committee reports the passage of the Army and Medical bill, the cessation of action to secure the passage of the three naval bills, the passage of the Carroll-Lazear pension bills and the probable failure of the objectionable sectarian bills, and makes no suggestion for further action on these or other national matters. Two resolutions relating to national affairs have been referred to the committee. One is as follows:

WHEREAS, The value of the services of the Dental Corps of the Army is now thoroughly recognized;

Resolved, That the Committee on Medical Legislation be instructed to further such legislation as will place the dental corps in the Army on a commissioned basis, such legislation to meet the approval of the War Department.

The House of Delegates last year endorsed a bill providing for a dental corps in the Navy, and as it seems desirable to make the proposed resolution more general so as to embrace both branches of the service the committee recommends the adoption of the following resolution:

The House of Delegates of the American Medical Association, recognizing the great importance of the services of the dental corps of both the Army and Navy and appreciating the importance of placing both on a commissioned basis, authorizes the Committee on Medical Legislation to assist in securing the passage of such bills as meet the approval of the War Department or the chief of the Bureau of Medicine and Surgery of the Navy Department.

2. The second national matter referred to the committee was the question of the revision of the patent laws concerning materia medica products, and the registration of names of medicines. The committee believes that the action proposed by the resolution would be very important in the development of therapeutics, and a great benefit to the public, and recommends the passage of the resolution substantially as presented.

3. Under state legislation the standing Committee on Medical Legislation reports the work that has been done during the last year by the Bureau of Medical Education toward the drafting of a medical practice law. It has made a comparison and analysis of existing medical practice acts and has published a summary of the same. It has nearly completed a history of medical legislation in the different states and in foreign countries. It has begun the compilation, collation, and comparison of the decisions of the state and federal courts so far as they relate to the constitution, interpretation and enforcement of medical practice acts. Your reference committee believes that this preliminary work is of vital importance to the final formulation of a satisfactory medical practice law that will be applicable to all the United States and

one that will serve as a basis for reciprocity in medical practice licensure.

4. The annual conference of the Committee on Medical Legislation and national council last December emphasized the importance of "Careful investigation of the actual conditions to which they apply," in the preparation of standard bills in the report of the special committee on uniform medical legislation, which report was adopted after a full discussion by the conference. It is agreed that in some states conditions are such that a new practice law would be desirable. The fact, however, that in 31 out of 46 states new practice laws have been passed or radical changes have been made within the last eight year shows that heretofore hasty and insufficiently considered action has been the rule. Hence your reference committee recommends the adoption of the recommendation of the standing committee that "only absolutely necessary changes in the State practice laws be undertaken preceding the completion of the investigation and preparation of a model bill.

The resolution of Dr. Cook on this subject provides no further instruction to the legislative committee than already given to it. The delegation of the duty of formulating a bill to a special committee would not be desirable, considering the work already accomplished by the bureau.

5. A summary of the work done in perfecting a model bill for state legislation on vital statistics is given in the report and the endorsement of the House of Delegates is asked for the bill. Your reference committee approves of the request, and recommends the adoption of the following resolutions:

Resolved, That the draft of a model law for state registration of births and deaths be approved as recommended by the Committee on Medical Legislation.

Resolved, That the Bureau of Legislation be authorized to make such minor changes as may seem advisable in cooperation with the commissioners on uniform state laws, the American Public Health Commission and the Bureau of the Census, and to urge the adoption of such legislation in non-registration states.

In the organization of the National Council and the National Auxiliary Committees, it is asked that the House of Delegates recommend to the various state associations the establishment of legislative committees and auxiliary legislative committees, and that the chairman of the Legislative Committee of a state be appointed a member of the National Legislative Council of the American Medical Association from that state, and that the members of the Auxiliary State Committees constitute the National Auxiliary Committees. Your committee approves this recommendation and recommends its adoption.

6. A further matter referred to this committee was a series of resolutions presented by Dr. Sanders of Alabama providing for the appointment of a committee of five to consider, first the question of securing a charter for the American Medical Association from the United States Congress; second, the revision of the constitution of the American Medical Association, and, third, the revision of the constitutions of the state societies and of the county societies. Your committee believes that the failure of previous persistent and long continued efforts towards securing a Federal charter for the American Medical Association has shown that the project is futile, and it does not believe that it is advisable to take up this matter again. It is the opinion of your committee that the other matters are outside of the province of the committee.

Respectfully submitted,

J. N. HALL,
M. W. IRELAND,
CHARLES A. L. REED,
HENRY G. BEYER,
SAMUEL BAILEY,
C. S. BACON, Chairman.

Dr. H. Bert Ellis, California, moved that the report be considered section by section.

Sections 1, 2, 3, 4, 5, and 6 were read and adopted, after which Dr. Philip Mills Jones, California, moved that the report be adopted as a whole, with the exception of that part of the report dealing with other matters outside of the province of the Committee, and that these be referred to the Committee on Organization, with the request that this Committee report next year. Seconded and carried.

Report of the Reference Committee on Hygiene and Public Health.

Dr. G. B. Young, U. S. Public Health and Marine-Hospital Service, chairman, presented the report of the Reference Committee on Hygiene and Public Health, as follows:

REPORT OF BOARD OF PUBLIC INSTRUCTION APPROVED.

The Reference Committee on Hygiene and Public Health reports that it approves the adoption of the report of the Board of Public Instruction. This Board asks that the House of Delegates indicate its sentiment concerning the signing of the articles which shall be published under its authority. To bring this subject before the House of Delegates, the Reference Committee offers the following:

Resolved, That it is the sense of the House of Delegates of the American Medical Association that papers authorized by the Board of Public Instruction shall bear the statement of such authorization by the American Medical Association, and at the discretion of the Board of Public Instruction may be signed by the author, and it is recommended that the Board of Trustees be asked for an appropriation of $5,000, or so much thereof as shall be needed. for this work.

Concerning the Boards it proposes to be established by the State Societies, this Committee suggests that as soon as the plans of the Board of Public Instruction of the American Medical Association are sufficiently elaborated, the Board enter into communication with the various state associations, requesting that these associations take such part in the work as shall insure the carrying out of the plans of the Board of Public Instruction of the American Medical Association.

REPORT OF COMMITTEE ON NOMENCLATURE AND CLASSIFICATION OF DISEASES.

The report of the Committee on Nomenclature and Classification of Diseases should be adopted, and for the resolutions contained therein the Committee suggests the following substitute which has been placed in their hands by Dr. Cressy L. Wilbur, Chief Statistician of the Division of Vital Statistics of the Bureau of Census:

Resolved, By the American Medical Association:

1. That the International Classification of Diseases and Causes of Death be recommended for all official mortality and morbidity statistical reports.

2. That the Committee on Nomenclature and Classification of Diseases present a report on the Nomenclature of Diseases of the Royal College of Physicians of London to the Association at its meeting in 1909, with such recommendations as may seem advisable for American usage, and with the assignment of each term indicated according to the International Classification.

3. That a tentative reconstruction of the International Classification be framed on the basis of the foregoing report, and recommendations be drafted for submission to the International Commission of Revision.

4. That inquiry be made as to the possibility of holding the next Decennial Revision of the International Classification at Washington in 1910 in connection with the International Congress of Hygiene and Demography.

5. That after the revision of the International Classification in 1910 the Nomenclature of Diseases be recast in corresponding form, so that there will be available under a uniform arrangement and with precise agreement in the meaning of terms (1) International Classification of Causes of Death. (2) International Classification of Sickness and Disability. (3) International Nomenclature of Diseases and Injuries.

The Committee suggests that the same Committee be continued to complete the work begun.

Respectfully submitted,

W. N. WISHARD,
A. R. CRAIG,
J. D. GRIFFITH,
G. B. YOUNG, Chairman.

At the conclusion of the reading of the report, Dr. Philip Mills Jones, California, moved that the report be received and the recommendations adopted. This motion was seconded by several delegates.

Dr. Frank Billings, Illinois: I am very sorry that Dr. Clark, the Chairman of the Board, is not here to say something in regard to the recommendations of the Reference Committee on Hygiene and Public Health in regard to the signing of these articles. We have had meetings during the last year in New York, and some of the members of the Committee have met in Chicago, so that we have discussed this matter very fully, and it seems, from the evidence we can secure all over the country, that it is pretty evenly divided as to whether these articles should be signed or not. We feel as a Committee that articles published in newspapers, written by scientific workers, should be signed, but perhaps there is doubt as to whether articles on the more practical subjects of diseases themselves would better be signed or not. A good many of the best men in the profession feel that such articles should not be signed, while many others feel that they should. There are a good many educators and editors who feel that they should be signed, while others feel that they should not, so that the Board was in doubt, and we are glad to have the opinions of the members of the Reference Committee on Hygiene and Public Health. I want you to think this matter over before you vote on it.

The President:—We will consider the preliminary portion of this report first, relating to the question of approving of the report of the Board of Public Instruction.

Dr. Frank Billings (resuming): The Board feels that if these articles or papers are signed, there ought to be some designation from the Committee that they are written with the approval of the Board of Public Instruction, and the writers should sign the articles under the direction of this Board. But that is not stated by this Committee. If that feature could be brought out more in detail it would give the Board proper instruction. Again, the Board feels that we should not establish Auxiliary Boards in states until the work has been well begun by the Board. I hope the members of the House have read the Report of the Board of Public Instruction and will feel at liberty to offer suggestions. I think the matter of establishing Auxiliary Boards may be left over for another year. I hope the House of Delegates through this Reference Committee will recommend to the Board of Trustees the appropriation of a certain sum of money for this Board for another year.

Dr. Lewis S. McMurtry, Kentucky:—I wish to emphasize what Dr. Billings has stated and to express the hope that the House will consider this matter very carefully before voting on it. There is no one thing that has given the Board of Public Instruction more difficulty and more cause for serious consideration that the question of the signing of these articles and how they should be signed. As Dr. Billings has stated, the Board of Public Instruction has had the matter under consideration. All this work is very important, and it is a new departure, and the Board of Public Instruction has been considering it with great care, and whatever action the House of Delegates takes regarding it we hope it will be done after due deliberation.

Dr. J. F. Percy, Illinois: In helping the Committee to decide whether or not these articles should be signed, there are only two ways of considering the question:

The objection to signing any of these articles must be dealt with merely on the ground of advertising of the individuals, and, it seems to me, the medical profession has gone too far in that direction. We have feared to allow the public to know the names of members of the profession who are engaged in scientific work, and that brings up the thought I had in mind in dealing with this question, namely, that two things are to be considered: First, the one of publicity, and, second, the one of advertising. Now, as a matter of publicity, I think the names of the men who prepare these articles should be attached to them. I believe it will give added weight to what is said, and it provides a recognized and ethical way of getting the names of the men before the public who are capable of preparing these articles. This matter has already come up in the Illinois State Medical Society. I dealt with it last year in my address as President of that Society, and the newspapers seized on it and used it not in the way that it was intended. They made out of it that there should be on the part of the medical profession a license for the universal advertising of our work, but that left out of scientific consideration the question in the public press. But when we have scientific men who can write scientific articles for the education of the public, I believe this Board can be helped and the work it is doing aided greatly if we give them permission to insist that the names of the writers accompany the articles that are sent out.

Dr. William T. Smith, New Hampshire: The lay press has been for years furnishing articles for public instruction, many of them dealing with topics of such varying value that they have been largely discredited by intelligent laymen. It seems to me, if this Association is going to put out articles for publication in the lay press, it should give its endorsement to the signatures of those who write the articles, or the articles should receive the endorsement of the Board.

Dr. G. B. Young, U. S. P. H. and M.-H. S.: Your Committee would sugest that the resolution can be recast in this form: That it is the sense of the House of Delegates that papers authorized by the Board of Public Instruction may be signed by the author or authors, but that neither residence nor position shall be designated, and that the Board of Trustees be asked to appropriate $5,000 for the execution and furtherance of this work.

Dr. H. D. Arnold, Massachusetts: It seems to me, that the adding of the signature of the writer to an article should be left to the Board, and should have the endorsement of the Committee representing the Association. In regard to the general principle, we have no matter of equal importance before the Association to-day as that of properly educating the public. As we medical men write articles the authority that stands back of them under the names of the writers is a matter of the greatest importance, and it must be so with the public. It would be desirable, if it can be so arranged, to have suitable control of the problem of advertising, but I think we can thoroughly trust the judgment of our Board.

Dr. A. K. West, Oklahoma: I rather disagree with the Committee in regard to leaving this matter to the signatures only. My impression is that the reading public is absolutely entitled to know the position of a man who is contributing an article and wherein his authority lies. Unless this is done, they will not fully appreciate the fact that the American Medical Association is behind this matter and guarantees the writer his authority and position. The reading public should know something about the organization of medicine. If a man contributes an article on a sanitary subject and holds some office of trust in the United States Government, it would be wise to give his position. It is true, most of our leading men are known at least locally over the state, and if any of them have served a term of residence as superintendent of public health in some of the larger cities it would give some weight to the laity to have that fact made known. I for one have no sympathy with the notion that we should contribute these articles anonymously and keep the public in the dark as to the source of our authority, or who it is that is contributing the articles. The name of a leading man of a given state, talking to the public who knows his ability to contribute an article, will carry more weight than the grinding out of scientific papers authorized by this Board.

Dr. Oliver T. Osborne, Section on Pharmacology and Therapeutics: I am heartily in favor of the opinion expressed by the gentleman who said that the titles should be published. I do not think we ought to say they *shall* be published.

I would move as an amendment that that part of the report which refers to the publication of the titles be left to the discretion of the Board.

Seconded by Dr. West.

Dr. C. E. Cantrell, Texas: It seems to me, that this whole matter should be left with the Board. The people who will profit by this education will not know very much about a single man's standing in the matter, and if in the judgment of the Board he is well enough known, it should be left to them to decide. The matter of signing an article or articles as coming from the American Medical Association is what is going to do the good to the people. The people have been denied knowledge on medical subjects for a long time. The lay press is looking for something to satisfy the reading public, and we want to establish sources of information so as to benefit the people. I think this matter should be left to the discretion of the Board of Public Instruction.

Dr. M. L. Harris, Trustee: I wish to say a word in regard to the latter part of this motion to the effect that the Board of Trustees has been willing to aid and encourage this Board of Public Instruction, and has already made an appropriation for the salary of a permanent secretary together with the expenses of publication, printing, etc., incurred by or asked for by the Board. That has already been done and the Board is still willing to continue.

Dr. G. B. Young, U. S. P. H. and M.-H. S.: If there is any ambiguity about the language used by the Committee, it has no objection to changing it in order to avoid any misconception.

The President: It seems to the Chair that such an important matter as this should be stated explicitly if possible. The Committee has been enlightened by the arguments that have been presented *pro* and *con* in regard to this matter, and a motion to recommit this, to have it formulated and presented by the Committee to-morrow would be the easiest way out of the matter.

REPORT RECOMMITTED.

It was accordingly moved and seconded that this part of the report be recommitted to the Reference Committee on Hygiene and Public Health. Carried.

Dr. Philip Mills Jones, California, then moved that the remainder of the report of the Reference Committee on Hygiene and Public Health be adopted as read.

Seconded and carried.

Report of the Reference Committee on Amendments to the Constitution and By-Laws.

Dr. George W. Guthrie, Pennsylvania, Chairman, presented the following report of the Reference Committee on Constitution and By-Laws:

The Committee reported that it unanimously approved the following:

Amend Section 1, Chapter 7, Book 2, Page 13, of the By-Laws by cutting out after the words "Board of Trustees," striking out

the following, "and the Orators shall be nominated, respectively, by the Sections on Practice of Medicine, on Surgery and Anatomy, and on Hygiene and Sanitary Science."

Strike out Section 5, Chapter 7, Book 2, Page 14, of the By-Laws entire and make Section 6, Section 5 and Section 7, Section 6.

Amend Section 1, Chapter 11, Book 4, Page 25, of the By-Laws to read as follows: "Section 1.—Time of General Meeting.—The General meeting shall be held at 10:30 a. m. on the first day of the annual session, and shall be presided over by the President, or, in his absence or at his request, by one of the Vice-Presidents."

Amend Section 2, Chapter 2, Book 4, Page 25, of the By-Laws by striking out the word "opening" in the second line and by striking out everything after the word "action" in the fourth line, making the section read as follows: "Section 2.—Address at the General Meeting.—Before the General Meeting shall be delivered the address by the President, whose recommendations shall thereupon go to the House of Delegates for action."

Amend Section 3, Chapter 11, Book 4, Page 25, of the By-Laws by striking out the words "first or opening" in the second line of the paragraph.

Amend Section 3, Chapter 12, Book 4, Pages 26 and 27, of the By-Laws so that the last sentence of the section shall read as follows: "The Section on Practice of Medicine, on Surgery and Anatomy and on Hygiene and Sanitary Science may each elect a member to deliver at the ensuing Annual Session the Oration on Practice of Medicine, the Oration on Surgery, and the Oration on State Medicine, before the respective sections."

On motion of Dr. H. Bert Ellis, California, the report was adopted.

Report of the Reference Committee on Miscellaneous Business.

Dr. Stuart McGuire, Virginia, read the following report of the Reference Committee on Miscellaneous Business:

Two subjects have been referred to us. *First*, the report of the Committee on Davis Memorial, supplemented by remarks of its Chairman, Dr. Marcy. This Committee requests an appropriation of $5,000 and power to fill vacancies. By reference to the report of the Board of Trustees, it will be seen that the question of making this appropriation has been carefully considered during the past year, and that the Board has declined to act favorably, owing to the precedent it would establish.

Our Committee is in full sympathy with the work of Dr. Marcy and his colleagues, but we unanimously endorse the policy of the Board of Trustees. We, therefore, recommend, *first*, that the appropriation be not endorsed and, *second*, that the Committee be given the power to fill such vacancies as occur in its body.

The other subject referred to us was the resolution of Dr. A. T. McCormack, endorsing the action of the Board of Trustees in restricting advertisements of medical preparations in THE JOURNAL of the Association to those approved by the Council on Pharmacy and Chemistry; and further, that this body request all state associations which do now, or may hereafter, publish or control medical journals to restrict advertisements to such approved preparations, and that the general secretary be requested to bring this resolution to the attention of all the state associations.

As this resolution is merely advisory and thoroughly in accord with the previous action of the Association, we recommend its adoption.

STUART MCGUIRE, Chairman.
J. HARRIS PIERPONT,
J. B. MCGAUGHEY,
H. H. MCCARTHY,
S. T. TURNER.

Dr. Philip Mills Jones, California, moved that the report of the Reference Committee on Miscellaneous Business be adopted as a whole. Seconded.

Dr. Walter Cheyne, South Carolina: I am in perfect accord with this report of the Committee, but I would ask the House of Delegates not to take action at this time in regard to the question of advertising in state medical journals, and of the question of the Trustees restricting the advertising in state journals as passed on by the Council on Pharmacy and Chemistry. The state of South Carolina is in thorough accord with that, and there are many other states that are in accord with the same idea, but there are some who are not. At this meeting we formed an association of state secretaries and editors under the auspices of the American Medical Association, and there was a Committee appointed at this Association meeting to which was referred the question of advertising. This is a matter for thought and consideration. It takes time to bring the people up to a high moral standard, and I think it would be wise at this time if that matter were left over and let this Association of State Editors and Secretaries talk it over and advise. I believe we are all in accord with the resolution, but as food takes time to digest in the stomach, so mental pabulum will take time to be digested, and it would be more prudent at this time not to incur any antagonism; it would make the way easier for us to put away the big stick.

Dr. Arthur T. McCormack, Kentucky: At the last meeting of the Association the following resolutions were unanimously adopted.:

WHEREAS, The Council on Pharmacy and Chemistry, after examining many hundreds of preparations, has officially announced approval of a large number of such preparations; and,

WHEREAS, We believe that the editors of many medical journals in this country, both official organs of state associations and privately owned journals, are desirous of cooperating in the work of freeing the medical profession from the nostrum control; therefore, be it

Resolved, That this Association most earnestly requests all medical journals to refuse to aid in promoting the sale of preparations which have not been approved by the Council, by refusing advertising space to such preparations; and be it further

Resolved, That we most earnestly request the moral and financial support of our members for those medical journals, whether privately owned or controlled by medical organizations, which disregard commercialism and stand firm for honesty and right dealing, thus sustaining the Council in its greatest work of the medical profession.

This resolution is a reiteration of the former resolution, with the exception that it specifies that the matter shall be referred to the constituent associations of this association for definite action.

Now, Mr. President, the time has come when the constituent associations can no longer refuse to take a definite stand on this question of simple honesty. The time has come when we can no longer compromise with dishonor. If any constituent association of this association wishes to continue to accept these advertisements, after the general request of last year, and the specific request of this year, then we should instruct our state associations to discontinue dishonest advertising in their pages.

Dr. Oliver T. Osborne, Section on Pharmacology and Therapeutics.—This puts me in mind of what happened in Connecticut. Last summer we had a pure food and drug law. The druggists opposed it, tooth and nail. They told the legislators and the governor to hold it over for the next session. We have a session once in two years. I saw the governor and tried to see what he could do for us, and he said if that law is good enough two years hence, it is good enough for us now. The law went through. If this matter is good enough a year hence, it is good enough now, and I hope the Committee's report will prevail.

Dr. A. K. West, Oklahoma.—This is a matter of great importance. It seems to me there can only be argument made on one side of the question. I think the gentleman from South Carolina misunderstands the attitude of the medical profession in this matter. The Council on Pharmacy and Chemistry does not intend to hurt anyone's business. It wants to help the business of the country. It wants to be a constructive force. It only criticizes dishonesty in preparations or claims, and it is careful about making these recommendations. It has not withheld recommendation from any manufacturer's product that is beyond any cavil. Therefore, this is not binding, it is only a suggestion, it is only helpful, and I can not see how any state journal or any journal controlled by a state association can do otherwise than to give attention to the suggestion made by the General Secretary, and I would like to see this promulgated, and now is the time to do it and not put it off another year.

The motion to adopt the report was then put and carried.

Conference Committee on Drugs Authorized.

Under the head of "New Business," Dr. Lewis S. McMurtry, Kentucky, offered the following resolution:

Resolved, That in accordance with the recommendation of the Committee on Organization, the President is requested to appoint a committee of three members to confer with a like committee to be appointed by the American Pharmaceutical Association in regard to drug reforms, a return to scientific prescription writing and other matter of material interest to these two associations.

On motion of Dr. Philip Mills Jones, California, the resolution was adopted.

At this juncture Dr. M. L. Harris invited the House of Delegates to visit the Association headquarters. Ten o'clock Thursday morning was selected as the time for making the visit.

Resolution on Davis Memorial.

Dr. G. Lane Taneyhill, Maryland, presented the following resolution, which was referred to the Committee on Miscellaneous Business:

Resolved, 1. That the following be and are hereby appointed by this body to be known as "N. S. Davis Endowment Fund for Research Work" Committee, namely, Drs. William E. Quine, Robert B. Preble, Heman Spalding, Frank S. Johnson, and William E. Morgan, with power to add to their number.

2. That the funds already in hand and so far as practicable subscriptions collectable be turned over to said committee forthwith.

3. That this committee shall control the same until a sufficient amount in their judgment shall have accumulated to warrant the beginning of research work.

4. That said committee shall make a written report annually to the House of Delegates of the American Medical Association.

5. That their term of service shall be 5 years or until their successors be appointed; that the terms of the above-named members be as follows: William E. Quine, 5 years; Robert B. Preble, 4 years; Heman Spalding, 3 years; Frank S. Johnson, 2 years; and William E. Morgan, 1 year, and that the presiding officer of the House of Delegates appoint one member each year thereafter.

Resolutions on Abortion.

Dr. Charles S. Bacon, Illinois, presented the following resolutions for the Section on Obstetrics and Diseases of Women:

Resolved, That the subject of the Chairman's address be referred to the House of Delegates, and that this body be and is hereby requested to appoint a standing committee which shall be called the National Committee on Criminal Abortion, whose duty shall be to investigate the laws on criminal abortion as they now appear on the statute books of the different states and territories of the United States, and to request all state and territorial medical societies to appoint like committees whose duty shall be to confer with the attorneys general of their states and territories, in the enactment of new and adequate laws governing criminal abortion. Be it further

Resolved, That the state and territorial committees shall confer with the said National Committee on Criminal Abortion annually, and that the said National Committee on Criminal Abortion, in cooperation with the National Committee on Medical Legislation, shall report annually to the House of Delegates what progress has been made in the several states and territories toward the suppression of criminal abortion, as well as what suggestions they may have to make as to prosecution of the cause.

On motion, these resolutions were referred to the Reference Committee on Hygiene and Public Health.

Resolutions on Public Instruction.

Dr. Charles S. Bacon also presented the following resolutions from the Section on Obstetrics and Diseases of Women:

Resolved, That the Section on Obstetrics and Gynecology recommends to the House of Delegates the advisability of establishing some system of instructing the youth of our country through lectures by competent persons in our public schools, before women's clubs, and in church organizations, and by monographs of suitable character, teaching the important and sacred rôle of the generative organs, and that this section urge our delegate to give this matter his best support in the House of Delegates. Be it further

Resolved, That a committee be appointed to consider the advisability of publishing a journal for lay subscribers which shall disseminate truth and counteract the falsehood of the many such publications now extant.

Dr. Arthur T. McCormack, Kentucky, moved that these resolutions be referred to the Board of Public Instruction with the exception of the recommendation regarding the establishment of a journal.

Seconded and carried unanimously.

Report of Chairman of American Committee for the Sixteenth International Medical Congress.

Dr. Frank Billings, Illinois, presented the following report for Dr. Musser:

To the House of Delegates:—In pursuance with your resolution confirming the appointment of the undersigned by the President of the International Congress of 1909, as Chairman of the Committee of Arrangements for the United States, I beg to report the selection of the following gentlemen as members of the committee:

The President of the American Medical Association, Dr. J. D. Bryant, New York; the President-elect, Dr. H. L. Burrell, Boston; the Surgeon-General of the Army; the Surgeon-General of the Navy; the Surgeon-General of the Public Health and Marine-Hospital Service;

Dr. F. Forcheimer, Cincinnati.
Dr. George H. Simmons, Chicago.
Dr. Richard Mills Pearce, New York City.
Dr. Reginald H. Fitz, Boston.
Dr. R. Matas, New Orleans.
Dr. William H. Welch, Baltimore.
Dr. F. Fremont Smith, Washington, D. C.
Dr. John A. Witherspoon, Nashville, Tenn.
Dr. C. H. Frazier, Philadelphia.
Dr. E. G. Janeway, New York.
Dr. Geo. M. Kober, Washington, D. C.
Dr. Ramon Guiteras, New York.
Dr. Grover W. Wende, Buffalo, N. Y.
Dr. H. A. Kelly, Baltimore.
Dr. Arthur D. Bevan, Chicago.
Dr. Chas. H. Stockton, Buffalo, N. Y
Dr. J. Riddle Goffe, New York.
Dr. W. E. Fischel, St. Louis, Mo.
Dr. John F. Binnie, Kansas City.
Dr. G. C. Huber, Ann Arbor, Mich.
Dr. Geo. Dock, Ann Arbor, Mich.
Dr. W. H. Carmalt, New Haven, Conn.
Dr. Samuel D. Risley, New Haven, Conn.
Dr. James E. Newcomb, Philadelphia.
Dr. James McBride, Los Angeles, Cal.
Dr. J. B. Murphy, Chicago.
Dr. W. F. Westbrook, St. Paul, Minn.
Dr. H. Moffatt, San Francisco, Cal.
Dr. James B. Herrick, Chicago.
Dr. Charles G. Kerley, New York.
Dr. M. H. Richardson, Boston, Mass.
Dr. A. Jacobi, New York.
Dr. S. J. Meltzer, New York.
Dr. Chas. A. L. Reed, Cincinnati.
Dr. Frank Billings, Chicago.
Dr. H. Sewall, Colorado.
Dr. Wm. J. Mayo, Rochester, Minn.
Dr. Victor C. Vaughan, Ann Arbor, Mich.
Dr. Geo. W. Crile, Cleveland, Ohio.
Dr. Geo. Ben Johnston, Richmond, Va.

At a meeting of the Committee, held Monday, June 1, 1908, the Chairman was authorized to appoint as executive committee the following: Dr. William H. Welch, Dr. A. Jacobi, Dr. R. H. Fitz, Dr. Frank Billings, Dr. G. E. de Schweinitz.

He was also authorized to name a secretary and to ask the American Medical Association and constituent societies of the Congress of Physicians and Surgeons to make the usual contributions for clerical expenses and postage.

The Congress meets August 24 to September 4. The Committee will have the various communications from the Committee of Arrangements in Budapest reported in the journals. The Chairman will send to any who desire the following: (1) The Rules. (2) The Announcements. (3) The Provisional Program. (4) Applications for Membership. (5) Applications to read papers. Respectfully,

J. H. MUSSER.

On motion the report was adopted with its recommendations.

Association to Cooperate with American Association for the Advancement of Science.

Dr. William H. Welch, Trustee, moved that the House of Delegates accept the invitation of the American Association for the Advancement of Science for the appointment of two members to represent the American Medical Association in the Council of the American Association for the Advancement of Science, and that the President appoint these representatives annually.

The motion was seconded by several and carried.

Dr. C. A. L. Reed Endorsed.

Dr. Lewis S. McMurtry, Kentucky, presented the following resolution:

Resolved, That this House of Delegates, without any reference to political affiliation, heartily commends the candidacy of Dr. Charles A. L. Reed for United States Senator.

Dr. Arthur T. McCormack moved that the resolution be adopted by rising vote.

Seconded and carried unanimously.

Pending Legislation in Congress.

Dr. H. L. E. Johnson, Trustee, presented two bills at present before Congress, one H. R., No. 6154, introduced by Mr. Livingston, and the other Senate bill No. 6976, introduced by Senator Gallinger, both of which were referred to the Reference Committee on Legislation and Political Action.

Resolution on Department of Public Health.

Dr. W. T. Sarles, Wisconsin, presented the following resolution, which was adopted by the Northwestern University Medical School alumni, to be referred to the House of Delegates:

Resolved, That it is the sense of this House that the time has arrived when a department of public health ought to be established by the national government, and to this end we ask the different political parties to make formal declaration in their respective national platforms soon to be submitted to the people.

On motion of Dr. Sarles the resolution was referred to the Reference Committee on Legislation and Political Action.

Resolutions on Ophthalmia Neonatorum.

Dr. N. K. Foster, Section on Hygiene and Sanitary Science, presented the following:

WHEREAS, The contagious character of ophthalmia neonatorum has long ago been clearly established; and,

WHEREAS, This disease is by far the most frequent cause of blindness; therefore, be it

Resolved, It is the opinion of the Section on Hygiene and Sanitary Science of the American Medical Association that ophthalmia neonatorum should be classed among the contagious diseases by all state and municipal boards of health and be dealth with accordingly by them.

S. T. ARMSTRONG, Secretary of the Section.

On motion, this resolution was referred to the Reference Committee on Hygiene and Public Health.

Resolutions Endorsing the United States Public Health and Marine-Hospital Service.

Dr. N. K. Foster presented the following, which was referred to the Reference Committee on Legislation and Political Action:

The Section on Hygiene and Sanitary Science wishes to express its appreciation of the excellent work done under the United States Public Health and Marine-Hospital Service, and especially to emphasize its efforts at San Francisco and New Orleans in aiding the state and municipal sanitary authorities in their fight against plague and yellow fever, respectively.

It further requests that the American Medical Association through its House of Delegates urge that the powers of the Bureau be so extended as to embrace all the functions necessary to the performance of the duties pertaining to the national department of of health.

S. T. ARMSTRONG, Secretary of Section.

Dr. N. K. Foster also presented the following:

It was moved, seconded and adopted by the Section on Hygiene and Sanitary Science that the delegates of that section request the House of Delegates to express the confidence of the American Medical Association in the work of the United States Public Health and Marine-Hospital Service in national health supervision.

S. T. ARMSTRONG, Secretary of Section.

On motion of Dr. McMurtry this resolution was referred to the Reference Committee on Legislation and Political Action.

Resolution Regarding Conference.

Dr. J. N. Hall, Colorado, offered preambles and a resolution requesting the Committee on Medical Legislation to arrange for a conference between the Committee of One Hundred and the officials of the Public Health and Marine-Hospital Service. On motion, these were referred to the Reference Committee on Legislation and Political Action.

Resolution on Work of Dr. McCormack.

Dr. Charles S. Bacon, Illinois, offered the following:

Resolved, That the duties of the Chairman of the Committee on Organization be, and they are hereby, made to include needed cooperation with the Committee on Medical Legislation, and that so far as may be consistent with the duties already devolving on that office Dr. J. N. McCormack, the present incumbent of that office, be, and he is hereby, directed to represent the Committee on Medical Legislation at its request, at Washington, when necessary or expedient, during the second session of the Sixtieth Congress.

On motion, the resolution was adopted.

Report of Reference Committee on Hygiene and Public Health Asked For.

Dr. E. C. Cantrell, Texas, moved that the action previously taken by the House of Delegates on the preliminary part of the report of the Reference Committee on Hygiene and Public Health with regard to the report of the Board of Public Instruction be rescinded and that the Committee be requested to report now.

Seconded and carried.

Report of Reference Committee on Hygiene and Public Health.

Dr. G. B. Young, U. S. Public Health and Marine-Hospital Service, reported on behalf of the Reference Committee on Hygiene and Public Health that the Committee approved the adoption of the report of the Board of Public Instruction as set forth on page 94 of the published reports.

On motion of Dr. Cantrell the report was adopted.

On motion, the House of Delegates adjourned until 2 p. m., Thursday.

Fifth Meeting—Thursday, June 4

The House of Delegates met at 2 p. m., and was called to order by the President. The roll was called and 109 members responded. The minutes of the previous meeting were read and adopted.

Election of Officers.

After the roll call the election of officers was in order. The President appointed as tellers Dr. R. R. Campbell, Illinois; Dr. C. E. Cantrell, Texas, and Dr. E. Garceau, Massachusetts.

The following officers were nominated, balloted for and declared duly elected:

President—Dr. William C. Gorgas, Ancon, Panama.

First Vice President—Dr. Thomas Jefferson Murray, Butte, Mont.

Second Vice President—Dr. John A. Hatchett, El Reno, Okla.

Third Vice President—Dr. Thomas A. Woodruff, Chicago, Ill.

Fourth Vice President—Dr. E. N. Hall, Woodburn, Ky.

General Secretary—Dr. George H. Simmons, Chicago, Ill., re-elected.

Treasurer—Dr. Frank Billings, Chicago, Ill., re-elected.

Trustees—Dr. Wisner R. Townsend, New York, to serve until 1911; Dr. Philip Mills Jones, San Francisco, to serve until 1911; Dr. William T. Sarles, Sparta, Wis., to serve until 1911.

The other members of the Board are Dr. William H. Welch, Baltimore, 1909; Dr. Miles F. Porter, Fort Wayne, Ind., 1909; Dr. M. L. Harris, Chicago, 1909; Dr. T. J. Happel, Trenton, Tenn., 1910; Dr. W. W. Grant, Denver, Colo., 1910; and Dr. Philip Marvel, Atlantic City, N. J., 1910.

Standing Committees Appointed.

The following nominations were made by the President and confirmed by the House of Delegates:

Committee on Medical Legislation: Dr. Charles Harrington, Boston, Mass., to serve until 1911.

The other members of the Committee are: Dr. Charles A. L. Reed, Cincinnati, Ohio, Chairman, 1909; and Dr. Charles S. Bacon, Chicago, Ill., 1910.

Council on Medical Education: Dr. Victor C. Vaughan, Ann Arbor, Mich., to serve until 1913.

The other members of the Council are Dr. Arthur D. Bevan, Chicago, Chairman, 1909; Dr. W. T. Councilman, Boston, Mass., 1910; Dr. James W. Holland, Philadelphia, Pa., 1912; and Dr. John A. Witherspoon, Nashville, Tenn., 1911.

Committee on Transportation and Place of Session: Dr. M. L. Harris, Chicago, Chairman, for 3 years.

Honorary Members Elected.

The following were elected honorary members: Dr. Edward F. Schaefer, Edinburgh, Scotland; Dr. August Martin, Griefswald, Germany; Dr. E. Treacher Collins, London, England.

Resolution of Thanks to Hosts Adopted.

Dr. Philip Mills Jones, California, presented the following resolution:

Resolved, That the American Medical Association extends its thanks and appreciation to the Cook County Medical Society, the Illinois State Medical Society and the medical profession of the City of Chicago and the State of Illinois for their courtesy, hospitality and tireless energy in entertaining this Association.

On motion, the resolution was adopted unanimously by a rising vote.

Report of the Chairman on Scientific Exhibit.

Dr. Frank B. Wynn, Chairman of the Scientific Exhibit, presented the following report:

The extraordinary Scientific Exhibit made at the two previous sessions aroused trepidation in the minds of many, lest the West might not be able to keep the pace set by the East. A visit to the exhibit will prove that these fears were not well grounded. The present exhibition certainly compares favorably with any previously made. First praise is due the men of Chicago who have so generously supported the enterprise. Nor are we unmindful of the great aid which has come from New York, Boston, Philadelphia, Baltimore, Washington, New Orleans, Cincinnati and Iowa City. And this, too, has resulted without great urging. The fact attests not only national loyalty, but a genuine enthusiasm for the success of the good work. The following are the medical schools, hospitals and individuals represented, in the exhibit:

COLLEGES.	HOSPITALS.
RUSH MEDICAL COLLEGE: E. R. Le Count and H. T. Ricketts.	MICHAEL REESE HOSPITAL, CHICAGO: M. Herzog.
NORTHWESTERN UNIVERSITY MEDICAL SCHOOL: F. Robert Zeit, Edward Carlton, Casey A. Wood, Frank Allport.	CINCINNATI HOSPITAL: H. J. Whitacre and J. B. Grelwe.
MEDICAL DEPARTMENT, COLUMBIA UNIVERSITY: J. Draper Maury, Robert M. Brown, and N. B. Leggett.	NEW YORK LYING-IN HOSPITAL: George Kosmak, Ross McPherson and J. E. Welch.
HARVARD MEDICAL SCHOOL: F. B. Mallory and S. B. Wolbach.	COOK COUNTY HOSPITAL: A. M. Stober.
MEDICAL DEPARTMENT, TULANE UNIVERSITY: Edmond Souchon.	ST. PETER STATE HOSPITAL (MINN.): H. D. Valin.
MEDICAL DEPARTMENT, IOWA UNIVERSITY: Henry Albert.	U. S. BUREAU OF CHEMISTRY: H. W. Wiley.
WASHINGTON UNIVERSITY, ST. LOUIS: C. C. Guthrie.	U. S. BUREAU OF ANIMAL INDUSTRY: L. E. Day, Chicago.
	ST. MARY'S HOSPITAL, ROCHESTER, MINN: Drs. Mayo and Louis B. Wilson.

INDIANA UNIVERSITY SCHOOL OF MEDICINE:
B. D. Myers.

PHILADELPHIA POLYCLINIC:
James A. Kelly and John M. Swan.

COLLEGE OF PHYSICIANS AND SURGEONS, BALTIMORE:
W. R. Stokes and Marshall L. Price.

MARINE-HOSPITAL SERVICE:
M. J. Rosenau and Chas W. Stiles.

INDIVIDUAL EXHIBITS.

Fenton B. Turck, Chicago.
E. Amberg, Detroit.
Charles L. Leonard, Philadelphia.
Charles H. Beard, Chicago.

There are in all twenty-six exhibits. Twenty of these represent the fields of anatomy and pathology, both general and special. Five are research exhibits and abundantly justify the committee's action in offering a medal to encourage research investigation. Regret is expressed that only one tuberculosis exhibit has been presented in competition for the medal offered. Not dismayed, the committee will offer a medal next year for the best tuberculosis exhibit which shall combine compactness with completeness, in elucidating the whole problem of tuberculosis. The idea is to secure a model exhibit, suitable for installation in public libraries, railway stations and the like.

No one will now question the great practical benefits of the Scientific Exhibit to the Association. The object lesson of a series of specimens illustrating some phase of pathology, or the suggestive and convincing information of a research exhibit, can not fail to make a lasting impression on the receptive mind. And while it must be admitted that incalculable good has resulted in an educational way, to the membership the fact is that the chief benefit accrues individually to those who prepare and present these exhibits.

It should furthermore be observed that in consequence of this movement in the American Medical Association the teaching museums of medical colleges generally have improved at manifold rate.

It is with a feeling of deep regret that we note the failure of many states and cities of potential medical influence to participate in this phase of the Association work. The observation is not made in a spirit of criticism, but rather as an exhortation. To such it is suggested that a great opportunity is lost. Let no one be deterred by the circumstances of environment. Did not Koch begin his great work as a country practitioner? The very creditable research exhibit for which a gold medal has been awarded, represents work carried on in the country. A certificate of honor has been awarded for an exhibit indicating superior surgical study, done in a small city. Bigness of the place or the exhibit counts for less than excellence of the product.

I have scant patience with the laboratory worker who refuses to participate in the work of the exhibit because of alleged lack of appreciation by members, or the inability of many to comprehend the full significance of scientific demonstrations made. The same argument would condemn the education of our children. Nor have I any sympathy for the clinician who rails at the laboratory man as impractical. I am prone to consider both unscientific in the broader sense; both impractical. The highest attainment is only achieved by their cooperation. The Scientific Exhibit affords a common meeting ground for all. Few of us can be discoverers; all should be coworkers. Let the science and art of medicine touch elbows in the march of medical progress.

Respectfully submitted,

FRANK B. WYNN,
Director and Chairman, Scientific Exhibit Committee.

On motion of Dr. H. Bert Ellis, California, the report was accepted and placed on file.

Report of the Committee on Awards.

Dr. William M. L. Coplin, Section on Pathology and Physiology, Chairman, presented the report of the Committee on Awards, as follows:

To the House of Delegates of the American Medical Association:

Your committee on awards would respectfully submit the following report:

In the opinion of the committee no exhibit coming within the specifications of competition for the medal on tuberculosis has been presented, and therefore, we would not, at this time, recommend the award of any medal.

The following awards are recommended:

DR. H. T. RICKETTS: Gold medal for research exhibit on tick fever.

DR. FENTON B. TURCK: Diploma for exhibit illustrating pathology of peptic ulcer.

NORTHWESTERN UNIVERSITY MEDICAL DEPARTMENT: Diploma for teaching exhibit, illustrating morbid anatomy.

RUSH MEDICAL COLLEGE: Diploma for teaching exhibit, illustrating morbid anatomy.

DR. CHARLES H. BEARD: Diploma for exhibit of drawings of the human eyeground.

DR. MAXIMILLIAN HERZOG: Diploma for exhibit, illustrating early human embryology.

ST. MARY'S HOSPITAL, ROCHESTER, MINN: Diploma for clinical and pathologic exhibit of stereoscopic photographs.

DR. EDMOND SOUCHON: Diploma for improved method for the preservation and exhibition of anatomic specimens.

DR. A. M. STOBER, COOK COUNTY HOSPITAL: Diploma for exhibit, illustrating blastomycosis.

DR. MALLORY AND DR. WOLBACH (HARVARD): Diploma for exhibit of drawings and photomicrographs, illustrating the classification of tumors.

U. S. PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE: Honorable mention for exhibit, illustrating the investigations of Dr. C. W. Stiles on hookworm.

IOWA STATE UNIVERSITY: Honorable mention for instructive tuberculosis exhibit.

CINCINNATI HOSPITAL: Honorable mention for creditable group of specimens.

PHILADELPHIA POLYCLINIC: Honorable mention for creditable exhibit of group of teaching specimens.

LYING-IN HOSPITAL OF NEW YORK: Honorable mention for creditable exhibit.

Your committee would further recommend a continuation of the policy of offering medals, diplomas, and honorable mention at the Scientific Exhibit of the Association.

Respectfully submitted,

W. M. L. COPLIN.
GEORGE DOCK.
GEORGE W. CRILE.

On motion of Dr. Oliver T. Osborne, Section on Pharmacology and Therapeutics, the report was adopted.

Resolution of Confidence in Secretary-Editor Adopted.

Dr. W. R. Tipton, New Mexico, introduced the following resolution:

Resolved, That this Association extend to its distinguished Secretary-Editor, George H. Simmons, its confidence and appreciation and pledge him its continued support in his splendid work.

On motion, the resolution was adopted by a rising vote.

Dr. Simmons said: I wish to thank you most earnestly and assure you that I am most grateful for this expression of your appreciation of the efforts I have made, although these would amount to little if it were not for the hearty cooperation of my associates and the endorsement and support of the best men in the profession.

Report of the Committee on Transportation and Place of Session.

Dr. E. Eliot Harris reported on behalf of the Committee on Transportation and Place of Session as follows:

In view of the fact that the receipts from our exhibit go to the Association, instead as formerly to the Local Committee of Arrangements of the state, the Committee has felt free to consider the best interest of the Association as a whole without regard to the capacity of the profession of a single state to entertain us and all that it means in the way of extraordinary expense. After considering invitations to hold the next annual session at Seattle, Wash.; St. Louis, Mo.; Washington, D. C.; Saratoga, N. Y.; New York City and Atlantic City, the Committee has selected Atlantic City, N. J., as the next place of meeting.

On motion of Dr. J. D. Griffith, Missouri, the report was adopted.

Thanks Extended to the President.

Dr. Arthur T. McCormack, Kentucky, moved that the thanks of the Association be extended to the President for his address which places before the profession and the public the high plane and altruistic character of the hopes and plans of the medical profession, and that we thank him for his fairness and consideration in presiding over the deliberations of its House of Delegates.

The motion was seconded by Dr. W. H. Sanders, Alabama, and others and was unanimously carried.

Resolution Regarding Badges.

Dr. Oscar Dowling, Louisiana, offered the following:

Resolved, That in future the official button of this Association shall be provided by each member and used instead of those of other designs, and that the local committee of entertainments may have the privilege of furnishing stick pins or pendants, showing the place and date of meeting.

On motion of Dr. H. Bert Ellis, California, this resolution was referred to the Board of Trustees.

Supplementary Report of the Reference Committee on Legislation and Political Action.

Dr. Charles S. Bacon, Illinois, Chairman, presented the following report of the Reference Committee on Legislation and Political Action:

The committee approves and recommends the adoption of the resolution presented to the House of Delegates by the Northwestern University Medical School Alumni, which reads as follows:

Resolved, That it is the sense of the House of Delegates of the American Medical Association that the time has arrived when a department of public health ought to be established by the national government, and to this end we ask the different political parties to make formal declaration in their respective national platforms soon to be submitted to the people.

Two other communications concerning the proposed department of health and especially its relations to the United States Public Health and Marine-Hospital Service were referred to your committee, one coming from the Section on Hygiene and Sanitary Science, the other from the floor of the House. The communication from the Section on Hygiene and Sanitary Science, after commending the work of the United States Public Health and Marine-Hospital Service in fighting the plague and yellow fever, requests the House of Delegates to urge that: "The Powers of the Bureau be so extended as to embrace all the functions necessary to the performance of the duties pertaining to the National Department of Health."

The other communication, after alluding to the new grounds of hope for the success of the movement to secure a national department of health, expresses a fear that the movement may not be supported by the Public Health and Marine-Hospital Service probably because of a misunderstanding of the purposes of the new department, and asks for a conference of the Committee on Medical Legislation with the Committee of One Hundred authorized by the American Association for the Advancement of Science, and the Surgeon General of the Army, Navy, and Public Health and Marine-Hospital Service, the Pure Food Bureau, the Bureau of Animal Industry, the Bureau of the Census, and other bureaus and laboratories, which would be interested in the organization of the proposed department of health.

It is evident that these two communications express two radically different policies. One policy asks for an extension of the powers of the Public Health and Marine-Hospital Service to embrace all the functions of a national health department. The other policy is that of the Committee of One Hundred and proposes the creation of a department of public health on new and much broader lines. For many years the latter policy has been that of the American Medical Association, and last year the Committee on Legislation was instructed to cooperate with the Committee of One Hundred in its work to secure such a department.

After mature consideration your Reference Committee is of the unanimous opinion that it is not wise to change the policy of the Association, and therefore disapproves of the resolution, which urges the extension of the powers of the bureau. On the other hand, it recognizes that a conference of the Committee on Legislation with a Committee of One Hundred and with the interested services and bureaus might be valuable in eliminating all grounds for opposition and coordinate all interested forces in the support of the movement, and therefore, recommends the passage of the following:

WHEREAS, The campaign for a national department of public health so long conducted by this Association and the sanitarians of this country is now so actively supported by the Committee of One Hundred of the Association for the Advancement of Science and by the departments of political economy of our great universities as to give new hope and inspiration to those interested in this movement; and,

WHEREAS, It is probable that the medical departments of the Army, the Navy and the Public Health and Marine-Hospital Service, the Pure Food Bureau, the Bureau of Animal Industry, the Bureau of the Census, and the other bureaus and laboratories, scattered through the various departments, could be brought to cooperate in building up such a department so long demanded by the profession and sanitarians and so vital to the welfare of the Nation; therefore, be it

Resolved, That the Committee on Medical Legislation be requested to arrange for such conferences with the Committee of One Hundred, the surgeons-general of the Army, the Navy, and the Public Health and Marine-Hospital Service, the bureaus above named and others or their representatives, jointly or severally, that may be deemed best, with a view of attempting to secure such a coordination and a cooperation of all these forces as will further the creation of such a department.

Other resolutions and suggestions relating to this subject seem at the present time unnecessary or undesirable.

It is recommended that the medical practice bill for the District of Columbia as well as the chiropractic bill be referred to the Committee on Medical Legislation with power to act in accordance with the principles already adopted by the House of Delegates for the guidance of the committee.

Respectfully submitted,

HENRY G. BEYER,
J. N. HALL,
M. W. IRELAND,
CHARLES A. L. REED,
SAMUEL BAILEY,
C. S. BACON, Chairman.

On motion of Dr. Alexander R. Craig, Pennsylvania, the report was adopted with its recommendations.

Supplementary Report of the Reference Committee on Miscellaneous Business.

Dr. Stuart McGuire, Virginia, Chairman, read the report of the Reference Committee on Miscellaneous Business, as follows:

Your Committee reports adversely on the resolution presented by Dr. Taneyhill, Maryland, which provides for the creation of a body to be known as the N. S. Davis Endowment Fund for Research Work, and also directs that all funds collected by the Committee on Davis Memorial be forthwith turned over to it.

This resolution, if adopted, would discharge Dr. Marcy's Committee, which has done earnest and devoted, if not successful, work, and would also divert the money which has been given for a specific purpose to one not contemplated by the subscribers.

We recommend that the present Committee on Davis Memorial, with Dr. Marcy as Chairman, be continued for another year, and that it be requested to consider the proposition presented by Dr. Taneyhill and report at the next meeting of the House of Delegates.

J. B. MCGAUGHEY,
H. H. MCCARTHY,
S. T. TURNER,
J. H. PIERPONT,
STUART MCGUIRE, Chairman.

Dr. S. Bailey, Iowa, moved that the report be adopted. Seconded.

Dr. G. Lane Taneyhill, Maryland, moved to substitute the preliminary report and the resolution for the report as submitted by the Reference Committee on Miscellaneous Business. Seconded.

On motion of Dr. R. S. Cathcart, South Carolina, the substitute offered by Dr. Taneyhill was tabled.

The President then put the motion of Dr. Bailey to adopt the report of the Committee and declared it carried.

Supplementary Report from the Reference Committee on Hygiene and Public Health.

Dr. G. B. Young, United States Public Health and Marine-Hospital Service, reported on behalf of the Reference Committee on Hygiene and Public Health regarding a resolution referred to it from the Section on Hygiene and Sanitary Science concerning the contagious character of ophthalmia neonatorum, that the Committee respectfully recommends its adoption.

On motion, the recommendation was concurred in.

The Reference Committee on Hygiene and Public Health also recommended, with regard to a resolution referred to it from the Section on Obstetrics and Diseases of Women concerning the establishment of a national committee on criminal abortion, that no action be taken, as it is within the purview of the Committee on Medical Legislation.

On motion, the recommendation was concurred in.

Dental and Associate Members Elected.

The following nominations were presented:

For dental membership: L. G. Noel, Nashville, Tenn.; C. K. Tetter, Cleveland, Ohio; Martin Dewey, Kansas City, Mo.

For associate membership: Henry B. Ward, Lincoln, Neb.

On motion, these applicants were elected.

Report of the Judicial Council.

Dr. C. E. Cantrell, Texas, presented the following:

One year ago, after the changing of the law, providing for filling of vacancies on this council, we held a meeting.

There was the case of Dr. George E. Petty of Memphis, on appeal from Tennessee, who appeared before the committee accompanied by his lawyer, presenting a brief that would have done credit to a court of last resort in our government. Inasmuch as the constitutional time had elapsed to entitle him to reappear before his county society for membership, we recommended that he do so with a report from your Judicial Council that they allow him the same consideration, as if he had never been rejected. We have since learned that his county society did accept his application for membership, but when the time came to vote on the same he was again rejected for membership.

Inasmuch as there had not been a meeting of this council for a number of years, there had accumulated a quantity of correspondence, which has been gone over carefully and disposed of.

The present Constitution and By-Laws, if properly understood and followed, would make it impossible for a case to reach the Judicial Council of this Association for adjustment on account of the time limit adjusting the matter itself. Your council apprehends no danger in the future of such a case reaching them.

Soon after my arrival at home after the Atlantic City session last year, Dr. Frederick R. Green, Assistant Secretary to the Association, sent to me by express one strong box well filled with papers; after searching diligently through them, I failed to find anything of apparent value to the Judicial Council, and beg authority from this House to return said box to Dr. Green so that he preserve it in the archives of this Association, and that the committee be relieved from further burden of this box. Respectfully submitted,

C. C. CANTRELL.

On motion the report was adopted and ordered placed on file.

There being no further business to come before the meeting, the House of Delegates then adjourned *sine die*.

MEMBERS OF THE HOUSE OF DELEGATES IN ATTENDANCE.

(The figure following the name of the state shows the number of delegates to which the state is entitled.)

ALABAMA—3.
- W. H. Sanders.....Montgomery
- J. D. S. Davis.....Birmingham
- I. F. Watkins.....Montgomery

ARKANSAS—2.
- G. A. Warren.....Black Rock

CALIFORNIA—3.
- Philip Mills Jones.....San Francisco
- H. Bert Ellis.....Los Angeles

COLORADO—2.
- J. N. Hall.....Denver
- Crum Epler.....Pueblo

CONNECTICUT—2.
- D. Chester Brown.....Danbury
- Everett J. McKnight,.....Hartford

DELAWARE—1.
- P. W. Tomlinson.....Wilmington

DISTRICT OF COLUMBIA—1.
- G. W. Cook.....Washington

FLORIDA—1.
- J. Harris Pierpont.....Pensacola

GEORGIA—2.
- Michael Hoke.....Georgia
- F. G. Hodgson.....Atlanta

IDAHO—1.
- E. W. Kleinman.....Hailey

ILLINOIS—7.
- C. S. Bacon.....Chicago
- J. R. Hollowbush.....Rock Island
- R. T. Gillmore.....Chicago
- J. F. Percy.....Galesburg
- L. H. A. Nickerson.....Quincy
- E. W. Weis.....Ottawa
- Frank Billings.....Chicago

INDIANA—4.
- L. L. Whiteside.....Franklin
- W. N. Wishard.....Indianapolis
- A. M. Hayden.....Evansville
- J. B. Berteling.....South Bend

IOWA—3.
- S. Bailey.....Mt. Ayr
- G. E. Crawford.....Cedar Rapids
- M. J. Kenefick.....Algona

KANSAS—3.
- H. L. Alkire.....Topeka
- J. E. Sawtell.....Kansas City
- George E. Tooley.....Washington

KENTUCKY—3.
- L. S. McMurtry.....Louisville
- W. W. Richmond.....Clinton
- A. T. McCormack.....Bowling Green

LOUISIANA—2.
- Charles McVea.....Baton Rouge
- Oscar Dowling.....Shreveport

MAINE—1.
- C. E. Williams.....Auburn

MARYLAND—2.
- Harry Friedenwald.....Baltimore
- G. Lane Taneyhill.....Baltimore

MASSACHUSETTS—6.
- Perley P. Comey.....Worcester
- C. H. Cook.....Natick
- H. D. Arnold.....Boston
- J. A. Gage.....Lowell
- O. J. Brown.....North Adams
- E. Garceau.....Boston

MICHIGAN—4.
- H. O. Walker.....Detroit
- Collins H. Johnston.....Grand Rapids
- D. E. Robinson.....Jackson

MINNESOTA—2.
- J. B. McGaughey.....Winona
- A. E. Spalding.....Luverne

MISSISSIPPI—2.
- W. W. Crawford.....Hattiesburg
- H. L. Sutherland.....Rosedale

MISSOURI—4.
- C. M. Nicholson.....St. Louis
- F. E. Murphy.....Kansas City
- C. Lester Hall.....Kansas City
- J. D. Griffith.....Kansas City

MONTANA—1.
- Donald Campbell.....Butte

NEBRASKA—2.
- F. A. Long.....Madison
- A. R. Mitchell.....Lincoln

NEW HAMPSHIRE—1.
- William T. Smith.....Hanover

NEW JERSEY—3.
- Luther M. Halsey.....Williamstown
- Charles J. Kipp.....Newark

NEW MEXICO—1.
- W. R. Tipton.....Las Vegas

NEW YORK—11.
- J. A. Fordyce.....New York
- Charles Jewett.....Brooklyn
- R. F. Weir.....New York City
- E. B. Angell.....Rochester
- J. C. Bierwirth.....Brooklyn
- D. C. Moriarta.....Saratoga
- Wisner R. Townsend.....New York City
- A. Vander Veer.....Albany

Charles Stover ..... Amsterdam
Wesley T. Mulligan ..... Rochester
W. H. Thornton ..... Buffalo

NEVADA—1.
Chas. H. Francis ..... Reno

NORTH CAROLINA—3.
J. F. Highsmith ..... Fayetteville
H. H. Briggs ..... Asheville
Albert Anderson ..... Raleigh

NORTH DAKOTA—1.
Victor Hugo Stickney ..... Dickinson

OHIO—6.
Rufus Hall ..... Cincinnati
Horace Bonner ..... Dayton
W. D. Deuschle ..... Columbus
Hugh F. Lorimer ..... Chillicothe
R. E. Skeel ..... Cleveland
Charles Graefe ..... Sandusky

OKLAHOMA—2.
A. K. West ..... Oklahoma City
Virgil Berry ..... Wetumka

OREGON—1.
W. T. Williamson ..... Portland

PENNSYLVANIA—8.
Adolph Koenig ..... Pittsburg
William T. Williams ..... Mt. Carmel
Samuel Wolfe ..... Philadelphia
Alexander R. Craig ..... Philadelphia
Philip Y. Eisenberg ..... Norristown
George W. Guthrie ..... Wilkes-Barre
David Dennis ..... Erie
W. F. Bacon ..... York

RHODE ISLAND—1.
John Champlin ..... Westerly

SOUTH CAROLINA—2.
Walter Cheyne ..... Sumter
R. S. Catheart ..... Charleston

SOUTH DAKOTA—1.
H. J. Rock ..... Aberdeen

TENNESSEE—2.
S. W. Woodyard ..... Greenville
S. S. Crockett ..... Nashville

TEXAS—5.
C. E. Cantrell ..... Greenville
Frank Paschal ..... San Antonio
S. T. Turner ..... El Paso
R. W. Knox ..... Houston

UTAH—1.
S. C. Baldwin ..... Salt Lake City

VERMONT—1.
J. N. Jenne ..... Burlington

VIRGINIA—3.
J. Shelton Horsley ..... Richmond
William E. Anderson ..... Farmville
Stuart McGuire ..... Richmond

WASHINGTON—1.
H. H. McCarthy ..... Spokane

WEST VIRGINIA—1.
O. O. Cooper ..... Hinton

WISCONSIN—3.
W. T. Sarles ..... Sparta
B. M. Caples ..... Waukesha
L. H. Pelton ..... Waupaca

WYOMING—1.
G. L. Strader ..... Cheyenne

PRACTICE OF MEDICINE—1.
George Dock ..... Ann Arbor, Mich.

OBSTETRICS AND DISEASES OF WOMEN—1.
T. J. Watkins ..... Chicago

SURGERY AND ANATOMY—1.
Edward H. Ochsner ..... Chicago

HYGIENE AND SANITARY SCIENCE—1.
N. K. Foster ..... Sacramento, Cal.

OPHTHALMOLOGY—1.
W. B. Marple ..... New York City

DISEASES OF CHILDREN—1.
Thomas Parke ..... Birmingham

STOMATOLOGY—1.
M. L. Rhein ..... New York City

NERVOUS AND MENTAL DISEASES—1.
Morton Prince ..... Boston

CUTANEOUS MEDICINE AND SURGERY—1.
R. R. Campbell ..... Chicago

LARYNGOLOGY AND OTOLOGY—1.
Otto F. Freer ..... Chicago

PHARMACOLOGY AND THERAPEUTICS—1.
Oliver T. Osborne ..... New Haven, Conn.

PATHOLOGY AND PHYSIOLOGY—1.
W. M. L. Coplin ..... Philadelphia

U. S. P. H. AND M.-H. SERVICE—1.
Surgeon G. B. Young ..... Chicago

U. S. NAVY—1.
H. G. Beyer ..... Washington, D. C.

U. S. ARMY—1.
Major M. W. Ireland ..... Washington, D. C.

MINUTES OF THE SECTIONS.

The minutes of the sections will be published next week. The new officers of the sections are named on advertising page 6 of this issue.

Medical Economics

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
BOWLING GREEN, KENTUCKY.

Ninth Month.

FOURTH WEEKLY MEETING.

Acute Ileocolitis.

Etiology: Age, season, diet, etc. Secondary to infection.

Bacteriology: Researches of Booker, Shiga, Flexner.

Pathology. Acute Catarrhal: Gross changes, intestinal contents, mucous membrane, blood vessels, lymph nodes, Peyer's patches. Microscopic changes.

Catarrhal Ulceration: Gross and microscopic changes.

Follicular Ulceration: Incidence, site, number, gross appearances. Microscopic changes.

Acute Membranous: Site, extent, gross appearances, microscopic changes, characteristic fibrinous exudate.

Associated Pathology: Bronchopneumonia, bronchitis, nephritic changes.

Symptoms.

Catarrhal: Cases of moderate severity, sudden onset, vomiting, pain, fever, diarrhea. Characteristic discharges later, blood and mucus, tenesmus. Usual course and duration. Tendency to relapse.

Severe Catarrhal Form: Symptoms more marked, high fever, frequently bloody stools, prostration, nervous symptoms, toxic symptoms, usual terminations. Gradual recovery.

Follicular Ulceration: Usually a terminal process of gastroenteric infection. Sudden or gradual onset. Continued temperature, mucus in discharges, little blood, slight vomiting, loss of weight. Tendency to remissions and relapses. Slow recovery and convalescence.

Membranous: Severe onset, high fever, vomiting, large bloody stools, prostration, nervous symptoms. Pain, rectal prolapse, tenesmus. Characteristic shreds of pseudomembrane. Usual termination, influence of age.

Chronic Ileocolitis.

Symptoms: Differentiation between acute and chronic stages. Absence of pain, tenderness and temperature. General condition, loss of weight progressive, loss of superficial fat, condition of skin. Stomatitis, gastric disturbance slight. Stools; number, character. Nervous symptoms. Course and duration, tendency to relapses.

Diagnosis: Differentiate superficial catarrhal inflammation follicular ulceration, and general tuberculosis.

Marriages

JOHN J. ANDREWS, M.D., to Miss Florence Pardridge, both of Chicago, June 3.

F. J. ATWELL, M.D., to Miss Helen Williams of Cooperstown, N. Y., May 28.

JAMES J. KENNEDY, M.D., to Miss Alice C. Mary, both of Philadelphia, April 29.

JOSEPH W. HELZ, M.D., to Miss Frances Raidy, both of Fond du Lac, Wis., May 26.

MORRIS H. EVANS, M.D., to Mrs. Lucy E. Schwartz, both of Emerson, Neb., June 2.

DAVID I. MILLER, M.D., to Miss Mary Frances Swartz, both of Harrisburg, Pa., June 2.

JAMES B. KNIPE, M.D., to Miss Grace Maria Stuart, both of Armstrong, Iowa, June 1.

CHARLES BURTON WORMELLE, M.D., to Miss Annie Estella Hyde, both of Boston, recently.

ADOLPH H. OLSEN, M.D., Oak Park, Ill., to Miss Elizabeth Witt Gordon of Chicago, June 10.

THOMAS J. BILLION, M.D., Sioux Falls, S. D., to Miss Gretta Houser of Monterey, Mexico, recently.

ARTHUR RAND WHITEFORT, M.D., St. Elmo, Ill., to Miss Mabel Andrews of Carthage, Ill., May 29.

HENRY HOCH, M.D., Texline, Texas, to Miss Rose C. Gerble of Jacksonville, Ill., at Carthage, Ill., May 17.

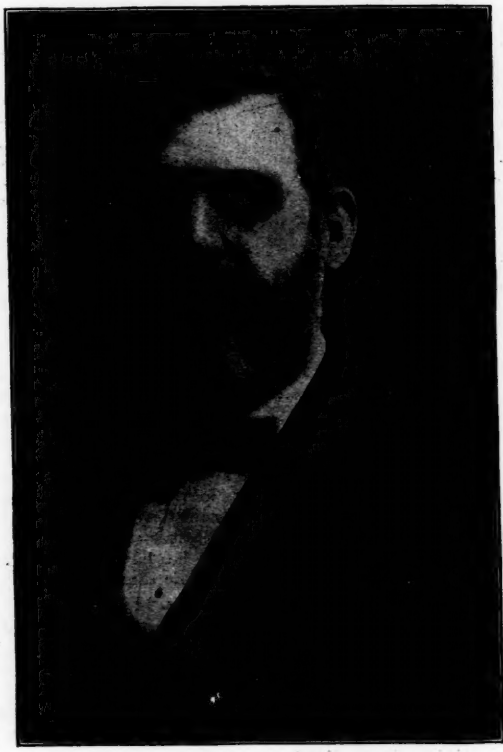
BLAKE MCKENZIE LANCASTER, M.D., Inkster, N. D., to Miss Maud Carson of West Lorne, Ont., May 20.

BENJAMIN DAVID LEMERY, M.D., Inkster, N. D., to Miss Sarah Muriel Full of Pembina, N. D., June 10.

ROBERT IRWIN MYERS, M.D., Washington, D. C., to Miss Cynthia Estelle Verney, at Cumberland, Md., May 19.

Deaths

James Coe Culbertson, M.D. Bellevue Hospital Medical College, New York City, 1865; from 1891 to 1893 editor of THE JOURNAL of the American Medical Association; editor and publisher of the Cincinnati *Lancet-Clinic* since 1873; a private and hospital steward in the Army and later assistant surgeon of the One Hundred and Thirty-seventh Ohio Volunteer Infantry during the Civil War and since that time a practitioner of Cincinnati; professor of principles and practice of medicine in the Cincinnati College of Medicine and Surgery since 1893; who as a member of the Cincinnati board of aldermen from 1884 to 1888, helped to make the University of Cincinnati a reality, and through whose efforts the ordinance was passed which gave to the institution the tract of 60 acres in Burnet Woods, where its buildings now stand; a prominent member of the Cincinnati board of education since May, 1896, and an active worker in the movement which has made possible public playgrounds, free bathhouses and other improvements; died at his home in Cincinnati, June 4, from arteriosclerosis, after an illness of two years and a half, aged 67.



James Coe Culbertson, M.D.—1841-1908.

Horace George Miller, M.D. Medical School of Harvard University, Boston, 1865; a member of the American Medical Association; president of the American Otological Society from 1900 to 1902; of the New England Ophthalmological Society and of the Rhode Island Medical Society; vice-president of the Harvard Medical Alumni Association from 1894 to 1897; president of the Brown University Medical Association; a member of the American Academy of Medicine, American Ophthalmological Society, American Association of Pension Examining Surgeons and American Association for the Advancement of Science; consulting ophthalmologist to the Rhode Island Hospital, St. Elizabeth Home, St. Joseph Hospital and Providence Lying-in Hospital; a veteran of the Civil War, and U. S. pension examining surgeon; one of the most distinguished eye and ear specialists of Rhode Island; died suddenly from cerebral hemorrhage, at his summer home in Camden, Maine, May 29, aged 68.

Jacob E. Schadle, M.D. Jefferson Medical College, Philadelphia, 1881; a member of the American Medical Association and American Rhinological, Laryngological and Otological Society; professor of laryngology and rhinology in the College of Medicine of the University of Minnesota; chief of staff of the St. Paul Free Dispensary; a member of the staff of St. Luke's Hospital and of the Northern Pacific Benefit Association, St. Paul; prominent throughout the northwest as a specialist on diseases of the nose, throat and ear; died at St. Joseph's Hospital, St. Paul, May 29, from cerebral hemorrhage, aged 58.

William H. Christie, M.D. Rush Medical College, Chicago 1868; a member of the American Medical Association and the Medical Society of the Missouri Valley; professor of materia medica and therapeutics in the Medical College of the University of Nebraska; physician to Immanuel and Clarkson Memorial hospitals, Omaha; a veteran of the Civil War, and a member of the local board of U. S. pension examining surgeons; for six years a member of the Omaha school board; died at his home in that city, May 28, from cerebral hemorrhage, after a short illness, aged 64.

Noble P. Howard, M.D. Medical College of Indiana, Indianapolis, 1879; a member of the American Medical Association, Mississippi Valley Medical Association, Association of Railway Surgeons of the P., C., C. & St. L. R. R., and American Association of Railroad Surgeons; local surgeon for the Pennsylvania System and Indianapolis & Eastern Railroad; for two terms secretary of the Hancock County board of health; and for four years postmaster of Greenfield, Ind.; died at his home in that place, May 26, after a lingering illness, aged 52.

Thomas G. Hyland, M.D. Bellevue Hospital Medical College, New York City, 1879; a member of the American Medical Association; health officer of Amsterdam from 1890 to 1894; coroner of Montgomery County from 1885 to 1888, and assistant surgeon of the forty-sixth separate company, N. G. N. Y.; a member of the staff of the City Hospital and St. Mary's Hospital, Amsterdam, N. Y.; died suddenly, May 26, from angina pectoris on a train while en route to Utica, N. Y., aged 50.

John Carroll Irish, M.D. Bellevue Hospital Medical College, New York City, 1872; a member of the American Medical Association; consulting surgeon to the State Hospital, Tewkesbury, Mass., and St. John's Hospital, Lowell, Mass.; medical examiner of the district for more than 30 years; formerly president of the Boston Gynecological Society; eminent as an abdominal surgeon; died at his home in Belvidere, Lowell, May 29, from cerebral hemorrhage, after an illness of three days, aged 54.

George Gallagher Hopkins, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1868; a member of the American Medical Association and American Academy of Medicine; consulting surgeon to St. John's Hospital, Brooklyn;

surgeon to the Home for the Aged, the Orphan House and Home for the Blind; a veteran of the Civil War, and an expert on light therapeutics; died suddenly near his home in Brooklyn, May 23, aged 64.

Ebenezer A. Deane, M.D. Berkshire Medical College, Pittsfield, Mass., 1853; once vice-president of the Massachusetts Medical Society, and once president of the Franklin District Medical Society; for nearly half a century a practitioner of Montague Center, Mass.; and for several years a member of the school board and a trustee of the public library; died at his home, May 31, after a protracted illness, aged 83.

Melvin O. Lower, M.D. Cincinnati College of Medicine and Surgery, 1874; a member of the American Medical Association and Association of Surgeons of the Pennsylvania Railroad System; local surgeon of the Vandalia Road at North Manchester, Ind.; formerly president of the Wabash County Medical Society; died at his home in North Manchester, May 31, from diabetes of 20 years' duration, aged 56.

Robert Harris Faunce, M.D. Medical School of Harvard University, Boston, 1882; a member of the Massachusetts and Barnstable district medical societies; for many years one of the medical examiners of Cape Cod and chairman of the school committee of Sandwich; died at his home in that town, May 25, after an illness of one day, from cerebral hemorrhage, aged 49.

John Charles Fremont Thorne, M.D. Rush Medical College, Chicago, 1884; a member of the Indiana State and Howard County medical societies; mayor of Kokomo in 1892; died at his home, May 24, from brain disease, three years after a collision between his buggy and a street car, in which he received severe injuries of the head, aged 50.

A. C. Davis, Jr., M.D. Chicago Homeopathic Medical College, Chicago, 1899; pastor of the Seventh-Day Baptist Church and a practitioner of West Edmeston, N. Y.; editor of three local journals; was thrown from his carriage, May 25, and instantly killed, aged about 40.

James G. Stewart, M.D. Medical College of Ohio, Medical Department University of Cincinnati, 1864; a veteran of the Civil War; died at his home in Biggsville, Ill., May 7, from cancer of the stomach, after a lingering illness, aged 77.

John T. Horton, M.D. Cleveland Homeopathic Medical College, 1884; three times coroner of Steuben Co., N. Y., and twice health officer of Hammondsport; died suddenly at his home in that place, May 23, from heart disease, aged 50.

Jesse C. Mosshammer, M.D. University of Buffalo (N. Y.) Medical Department, 1904; a member of the American Medical Association; died at his home in Dayton, Ohio, May 27, from pleuropneumonia, after an illness of 10 days, aged 36.

David E. Spoor, M.D. Hahnemann Medical College and Hospital of Chicago, 1878; of Schenectady, N. Y.; died at Ellis Hospital in that city, May 29, as a result of injuries received in an automobile accident two days before, aged 62.

George Delance Emerson, M.D. University of Vermont, College of Medicine, Burlington, 1888; formerly of Auburn, Maine; died at his home in South Berwick, Maine, May 24, from kidney disease, after a short illness, aged 43.

Robert D. Connell, M.D. Pulte Medical College, Cincinnati, 1879; at one time a member of the city council of Columbus, Ohio; died suddenly from cerebral hemorrhage while making a professional call in that city, May 31, aged 57.

Henry Case, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1865; for 22 years a practitioner of San José, Cal., died May 27, at his home in that city, after a prolonged illness, aged 67.

Dewitt Clinton Griswold, M.D. Rush Medical College, Chicago, (Registration, Wisconsin, 1899); died at his home in Clinton, Wis., May 6, from chronic gout, after an illness of nearly four months, aged about 65.

William P. Madden, M.D. Eclectic Medical Institute, Cincinnati, 1877; a veteran of the Civil War; died at his home in Xenia, Ohio, May 30, from septicemia, due to an operation wound three years before, aged 64.

Samuel J. Funk (License, Pa., 1881); a practitioner of Trumbauersville, Pa., for more than half a century; died at his home in that place, May 17, from cancer of the stomach, after a prolonged illness, aged 72.

Agnes Kemp, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1879; for many years a practitioner of Harrisburg, Pa.; died at the home of her son in Swarthmore, Pa., May 20, aged 85.

Ellen Hancock Lyon, M.D. Hahnemann Medical College and Hospital of Chicago, 1892; of Chicago; died at her home in Wheaton, Ill., May 24, from cancer, after an illness of two years, aged 38.

Michael Getz, M.D. Illinois Medical College, Chicago, 1901; a member of the Illinois State Medical Society; died at his home in Chicago, May 29, from uremia due to chronic nephritis, aged 47.

L. A. Archibald, M.D. Louisville (Ky.) Medical College, 1872; died at his home in Slaughtersville, Ky., from spinal concussion, May 26, due to a fall from a ladder the day before, aged 60.

Allen Pence (Years of Practice, Ind.); for 61 years a practitioner of Terre Haute, Ind.; at one time alderman and city commissioner; died suddenly at his office, January 22, aged 88.

Theophilus E. F. Miller, M.D. Hahnemann Medical College and Hospital of Chicago, 1886; died suddenly from cerebral hemorrhage, at his home in Westport, Ind., May 26, aged 57.

Medad S. Corey, M.D. University of Buffalo (N. Y.) Medical Department, 1861; a pioneer practitioner of Chautauqua Co., N. Y.; died at his home in Fredonia, May 25, aged 81.

George B. Spencer, M.D. Western Reserve University, Medical College, Cleveland, 1867; of Weston, Ohio; died suddenly at his summer cottage on the Maumee, May 31, aged 62.

Walter R. Dodds, M.D. Missouri Medical College, St. Louis, 1884; of St. Louis; died in the St. Louis City Hospital, May 7, from nephritis, after an illness of eight days, aged 42.

Steven Simon Thrower (License, Cranshaw Co., Ala., 1884); one of the oldest practitioners of that county; died at his home in Bradleytown, May 21, after a long illness.

Dillard S. Price, M.D. University of Louisvile, Medical Department, 1856; died at his home in Winchester, Ky., May 30, from senile debility, after a long illness, aged 77.

Thomas E. Wetzel, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1891; died at his home in Boise, Idaho, May 23, from rheumatism, after a long illness, aged 39.

John E. Brooks, M.D. Eclectic Medical Institute, Cincinnati, 1884; died at his home in Whittier, Cal., May 19, after an illness of several weeks, aged 49.

Charles De Long Chandler, M.D. Hahnemann Medical College and Hospital, Philadelphia, 1896; died at his home in Hartington, Neb., May 28, aged 37.

W. D. McCurdy (License, Ark., 1906); for several years a practitioner of Grand Glaize, Ark.; died at his home in that place, May 21, aged 39.

Milton Cain (Years of Practice, Ill., 1877); died at his home in Lewistown, Ill., May 24, from nephritis, aged 75.

Society Proceedings

COMING MEETINGS.

Indiana State Medical Association, French Lick, June 18-19.
Medical Society of New Jersey, Cape May, June 18-20.
Medical Society of State of North Carolina, Winston, June 16-19.
Michigan State Medical Society, Manistee, June 24-25.
State Medical Society of Wisconsin, Milwaukee, June 24-26.
Oregon State Medical Association, Portland, July 1-3.
American Ophthalmological Society, New London, Conn., July 15-16

ILLINOIS STATE MEDICAL SOCIETY.

Fifty-eighth Annual Meeting, held at Peoria, May 19-21, 1908.

(*Continued from page 1932.*)

Treatment of General Peritonitis Complicating Appendicitis.

DR. DANIEL N. EISENDRATH, Chicago, reviewed briefly the principal points in the pathology and diagnosis of this complication of appendicitis. Although it was formerly a much dreaded condition, it is now felt that the surgeon can control the outcome in the majority of cases if they are seen during the first twenty-four to seventy-two hours. The reasons for this improvement are a rapid technic in removing the source, i. e., the appendix; a minimum amount of manipulation of the intestines, with no irrigation; the use of the Fowler position, and the continuous administration per rectum of normal saline solution. He presented a back-rest for maintaining the Fowler position, and also described an apparatus for administering salt solution.

Management of Health of State.

PRESIDENT BAUM, in his annual address, suggested the establishment of a state commissioner of health and a board of medical examiners in lieu of the present State Board of Health, saying that these two separate offices had worked well in other states. This matter was referred to the legislative committee, that it might prepare a bill covering the recommendation and present it to the state legislature.

Control of Hyperacidity by Diet and Drugs.

DR. M. MILTON PORTIS, Chicago, detailed some experiments conducted on dogs with Pawlow stomachs. A great variety of foods were given, and in all cases it was found that vegetables excited the stomach to the least secretion. The time of secretion and the amount secreted are much reduced as compared with the feeding of meat, but the per cent. of HCl secreted could not be reduced. The total amount of secretion can be still further reduced by giving the vegetables in a finely divided state. The alkalies, especially if given before meals, reduce secretion, as has been previously observed. Morphin and hyoscin have very little effect. Atropin and strontium bromid have a marked effect in reducing the amount of secretion.

Baths and Exercises in the Treatment of Heart Disease.

DR. ROBERT H. BABCOCK, Chicago, emphasizes the fact that the water should be merely warm or tepid, 95 to 92 F., for the initial baths, and weakly saline, never warm enough to feel hot to the patient; also that as the patient's reaction permits, the temperature should be lowered from time to time, until toward the end of the series a temperature of 85 F. could be obtained, by which time the waters are strongly charged with sodium chlorid, 3 per cent., calcium chlorid, 1 per cent., and made strongly effervescing. The weaker baths should be considered sedative and suited to weak dilated hearts, while the colder, strongly saline and carbonated waters are stimulating. Since the natural Nauheim waters are strongly impregnated with calcium salts, Dr. Babcock never omits the addition of calcium chlorid, as some American physicians do. Since these baths are capable of harm as well as good, he believes they should be prescribed only after frequent careful examinations of the patient, and with due regard to the individual's reaction after, and his sensations during, each bath. This treatment is applicable chiefly to myocardial incompetence and valvular insufficiencies. These baths should be given cautiously in cases of stenosis and arteriosclerosis, and are of doubtful utility when chronic fibrous mediastinitis is present, and not at all useful in cases of aortic aneurism or ectasia, for although the heart's contractions may be invigorated, the vascular lesion can not be improved and may be increased. This balneologic treatment should be deferred, in cases of pronounced dilatation with edema, until rest and other measures have improved cardiac power.

Exercises are of two kinds, the so-called resistance exercises and medical gymnastics. The former consist of extension and rotation of the extremities and trunk, performed against a measured degree of resistance offered by a trained assistant. Their beneficial effects in feeble dilated hearts are attributed to dilatation of the intermuscular arterioles, and consequent unloading of the heart's cavities. Patients with chronic myocarditis soon appreciate the benefit of exercise by a lessening of dyspnea and palpitation, by increased strength, and by reduction in abdominal girth. The speaker keeps close watch on the effects and in some cases combines medicinal therapy with the exercises. He concludes that: 1. He is justified in recommending medical gymnastics as an important part of the management of myocardial incompetence when this is not too advanced. 2. They should be performed only with the aid of a trained assistant who understands the object and kind of exercises to be given, and who will maintain close watch on the pulse and respiration. 3. These medical gymnastics produce results similar to those of resistance exercises, and in suitable cases more quickly and powerfully. 4. Individuals with myocardial incompetence should not be allowed to substitute for these medical gymnastics so-called self-resisting movements at home. 5. The effect on the heart should be watched by a physician, who can judge of the degree of benefit obtained and decide how long the exercises shall be taken.

The Use of the X-Ray by the General Practitioner.

DR. GEORGE S. EDMONDSON, Clinton, has used the *x*-ray in diagnosing fractures, in determining the extent of bone lesions, and also for diagnosing dislocations. He has been highly pleased with the *x*-ray treatment in cases of lupus. One case of carcinoma of the cervix yielded satisfactorily to the application of the *x*-ray by means of the Caldwell tube, but returned just as rapidly after the treatment had ceased. He has treated many cases of superfluous hair on the face, and in not one has he witnessed a failure to remove the hair. In the course of a few months the hairs invariably return, but usually are not so hard to remove the second or third time. He has treated several cases of acne by the *x*-ray with satisfactory results.

Fracture of the Base of the Cranium, with Diastasis of the Left Temporo-Parietal Articulation; Complete Recovery.

DR. GEORGE DE TARNOWSKY, Chicago, reported a case of fracture of the base of the cranium, and summarized by saying that all head injuries should be prepared in a surgical way. All cases should be placed under the very keenest observation obtainable. No operation should be done in cases of diffuse cerebral contusion. A progressive disintegration of cellular structures can not be restrained by a simple relief of pressure. Operation should never be done hurriedly or without first observing the symptoms of the case and their trend, namely, increasing severity or manifest tendency to spontaneous recovery. Having diagnosed epidural hemorrhage, if coma should deepen, temperature decline and pulse grow weaker, operation is indicated at once; if, with reaction, the clinical picture shows a tendency to remain stationary or to clear up, one should wait and watch. Not all blood clots need surgical removal in order to effect a complete recovery.

Traumatism of the Brain.

DR. J. W. MCDONALD, Aurora, discussed fractures of the skull, their diagnosis and treatment. He devoted considerable space to the consideration of intracranial lesions, such as hemorrhage, thrombosis of sinuses, contusions, lacerations and their sequelæ. He likewise discussed meningeal and parenchymatous inflammations usually of a septic character. He reported a case which was interesting on account of the extent of the fracture, laceration of the artery, extent of the hemorrhage, and the speedy recovery.

DISCUSSION.

DR. DANIEL N. EISENDRATH, Chicago, said there is a condition of laceration or contusion of the brain which must be separated completely in the diagnosis and prognosis from concussion and compression. There may be cases of contusion or laceration of the brain without any of the accompanying symptoms of head injury, such as are usually found in compression and concussion. These cases manifest themselves shortly after the injury, without unsconsciousness or other focal symptoms except a focal disturbance, such as would be ordinarily due to pressure on some cortical area of the brain.

DR. T. J. SULLIVAN, Chicago, said that in all injuries, where there is only a slight abrasion, no one is justified in allowing them to pass without thoroughly shaving, disinfecting and closing the wound with some occlusive dressing. In many of these injuries, where there is an escape of fluid from the ear, and where other symptoms do not warrant immediate operative interference, thorough attention to the ear is essential. The ear should be thoroughly washed with soap and water for a considerable time, and after that with alcohol, and in children, for instance, where there is an escape of serum, it can be completely stopped, and an occlusive dressing applied by packing the ear with iodoform gauze, saturated with compound tincture of benzoin. This will prevent the escape of serum, make an antiseptic occlusive dressing, and cut off the port of entry of infection.

DR. S. C. STREMMEL, Macomb, agreed with the last speaker,

but could not agree with Dr. McDonald in using applications of ice in these cases, as it interferes with the early reaction and thus with repair in the case of milder injuries. In more serious injuries it is different.

DR. H. C. FAIRBROTHER, East St. Louis, said the picture-complex of a fracture of the base of the skull is variable, and not the same in any two cases, but depends on the site of fracture, the amount of hemorrhage, and the crushing force producing the fracture. There is no definite picture of symptoms pointing to certain fractures of the base of the skull, and the only certainty in arriving at a conclusion is by post-mortem examination in fatal cases.

DR. MCDONALD said that an ice-cap may be used when indicated only, and then not applied to the site of the fracture, as it would delay repair.

DR. TARNOWSKY, in closing, thought the diagnosis of fracture of the base and of diastasis of the temporo-parietal articulation in his case was positive and not guesswork.

Injuries to the Diaphragm.

DR. JOHN YOUNG BROWN, St. Louis, emphasized the importance of early diagnosis and the prompt surgical treatment of these injuries.

Treatment of Tuberculous Sinuses by Bismuth Paste.

DR. EMIL G. BECK, Chicago, said that in the ten cases presented before the Chicago Medical Society, January 15, the fistulas have remained closed, and the two which at that time had a slight discharge have since closed. A longer series of cases treated since, with equally good results, has taught him some new points. First, the bismuth paste, if it is not discharged during the healing process, becomes encapsulated and finally absorbed. In cavities with rigid walls, the bismuth plug becomes first organized by connective tissue, and after absorption of the bismuth, fibrous tissue remains. When the walls of the abscess are resilient, such as the pleura, for instance, they will gradually collapse while the bismuth is undergoing absorption. This can be proved, first, by the taking of radiographs at certain periods; second, by physical examination of the patient; third, by microscopic examination of tissues. Bismuth subnitrate, although considered an insoluble substance, has been proved to be absorbed, when taken internally, or injected into fresh wounds. It was found by many observers in the urine, blood and milk, as well as in the organs, thirty days after ingestion.

Having proved the absorption of bismuth, the practical question arises, Is the absorption harmful? Little is heard of bismuth poisoning, although nearly every practitioner prescribes that drug, and radiographers administer as much as 40 grams of pure bismuth subnitrate in one bismuth meal, to obtain radiographs of the digestive tract, and none has observed any ill-effects from it. A few authentic cases of bismuth poisoning found in literature have put the author on his guard, but in about 2,000 injections he has not yet met with any symptoms of poisoning. Guinea-pigs were injected with one-twentieth of their body weight of bismuth paste, exhibiting no symptoms of poisoning. Arsenic-free bismuth may be considered harmless, but it is safer not to use more than 100 grams of the 33 per cent. bismuth-vaselin paste in the first injection.

The bactericidal value of bismuth subnitrate has been underestimated. The author has determined that its presence in the living tissues invariably causes the gradual diminution, and often a complete extermination, of micro-organisms in the secretions. The *Bacillus tuberculosis* shares the same fate. The discharge from the fistula likewise changes from a purulent or seropurulent to the serous. The method is contraindicated wherever the plug may obstruct the secretion from vital organs, or in the cranial cavity, where pressure on the brain may cause serious damage. There is a promising field in the sinuses of the head. Five cases of resisting suppurative disease of the antrum of Highmore have been cured by Dr. Joseph C. Beck by this method.

The most important advance made since January 15 is the prevention of tuberculous sinuses. The method is as follows: A cold abscess following tuberculous disease should, under the most aseptic measures, be opened by an incision about one-quarter of an inch long, the pus evacuated, and the cavity refilled at once with half the quantity of a 10 per cent. bismuth-vaselin paste, and the opening not sealed. A sterile gauze dressing is placed over the incision and a five-yard sterile gauze bandage is snugly put on and securely pinned, so that the patient, usually a child, can not displace and infect it. Fresh dressings are to be applied daily under aseptic precautions. Should the opening close and fluid reaccumulate, it should be reopened; the fluid, which is then more serous, squeezed out, but the cavity need not be refilled, as it will usually remain collapsed.. Three cases so far treated in this way have demonstrated the practical value of the prophylactic method by bismuth paste injection.

(*To be continued.*)

ASSOCIATION OF AMERICAN PHYSICIANS.

Twenty-third Annual Meeting, held in Washington, D. C., May 12-13, 1908.

(*Continued from page 1932.*)

Acute Pancreatitis.

DR. JOSEPH SAILER, Philadelphia, has produced pancreatitis by the injections of oil into the duct of Wirsung and described the completeness and rapidity of the process. There was apparent absence of any specific toxic substance in the pancreas itself. The manner in which pancreatitis is produced is still unknown. Injection of almos. any substance will produce it; obstruction of duct seemed to predispose. Three views are held at present; it might be bacterial; it may be ferment infection due to the escape of trypsin; we are not in a position to make any definite statement. He concluded that the serum of dogs suffering with pancreatitis is more toxic than normal blood; it has been injected into guinea-pigs and a parenchymatous necrosis of the pancreas was produced with no evidence of bacterial infection. Dogs dying from the disease showed definite lesions. It is probable that it will be found possible to produce immunity from the toxic effects. It is impossible at present to say whether the toxin is trypsin or some other element of the pancreatic secretion, or an abnormal product from disease of the pancreas, or from disturbance of the metabolic processes.

Clinical Features of Pancreatitis.

DR. JOHN H. MUSSER, Philadelphia, said that pancreatitis with hemorrhage may occur and be the cause of death in the course of typhoid fever. There may be renal calculus at the same time as the pancreatitis. Patients may recover from acute pancreatitis. Of 9 cases there had been shock in 8; usually upper abdominal symptoms; in 7 epigastric tumor was present. Diarrhea occurred in 6 of the 9 cases. In no instance were there symptoms of intestinal obstruction. Subnormal temperature occurred in 9 cases; dyspnea in 8; increased pulse rate in all. There was no opportunity to make positive observations of the stools. Two deaths occurred after operation; 3 without operation.

DISCUSSION ON PANCREATITIS.

DR. R. FITZ, Boston, thinks the doctor had an enviable experience in seeing so many cases in which diagnosis was confirmed by operation or death. Many see cases suspected to be pancreatitis and the difficulties of making the diagnosis have not been much cleared up by recent investigations. He thinks that Dr. Sailer's work might give a new aid in making diagnoses; if the results proved as in his experimental cases it would be valuable.

DR. W. H. WELCH, Baltimore, asked Dr. Sailer if he had tested the toxic action of the serum on dogs. The dog's serum is normally toxic to the guinea-pig, but of course not in the doses he used. The serum of the dog with acute obstructive pancreatitis becomes increasingly toxic. In pneumonia in the human, the serum is highly toxic to the rabbit, but that is not evidence of specific toxin. The human serum becomes toxic to lower animals. The experiments would be more convincing

if they demonstrated that the serum of the dog the subject of pancreatitis is toxic to normal dogs.

Renal Hypernephroma Simulating Aortic Aneurism.

DR. AUGUSTUS A. ESHNER, Philadelphia, said that hypernephroma is a tumor of adrenal structure, involving the adrenal gland itself, or situated in some other organ or tissue. It may be small and benign, and remain encapsulated, or large and malignant and give rise to metastasis. The primary growth is often situated in the kidney, while secondary growths have been observed in many structures, especially in the bones. The symptoms do not differ essentially from those of other forms of neoplasm. In the case reported by Dr. Eshner a pulsatile elastic tumor of the manubrium sterni, in the course of the aorta, and yielding a systolic murmur on auscultation, was found after death to be a metastatic growth secondary to a hypernephroma of the kidney. There were growths also in the lung, uterus and liver.

DISCUSSION.

DR. C. G. STOCKTON, Buffalo, said that the symptoms were not unlike those of other malignant tumors. He had a case of remarkable irregular intermittent fever that had continued for nearly a year. The patient had been in a malarial climate and was suspected of having malaria. Tumor was discovered in the region of the neck; enucleated and proved to be a hypernephroma.

Negative Results in Blood Cultures.

DR. E. LIBMAN, New York, said that in all blood culture work up to the present stress has been laid on the positive findings. As a result of a study of a large number of blood cultures he has found that the absence of bacteria is often significant in giving diagnostic and therapeutic indications. Negative blood cultures are particularly important in determining the presence of certain intra-abdominal diseases and in the diagnosis of endocarditis. He has studied over 1,500 cases.

DISCUSSION.

DR. W. H. WELCH, Baltimore, commented on the great value of these studies. A large number of routine examinations analyzed in this way would bring out conclusions of the greatest clinical importance. One thing, he said, stands out particularly as confirmatory of the idea entertained now by most bacteriologists—in the human infections from bacteria in the blood we are not dealing with a condition like septicemia in the lower animals. They may be there accidentally, particularly where the focus of infection is so located that there is easy entrance of the bacteria into the circulation. The result of tying the jugular vein in cases of sinus infection—the prompt disappearance of the bacteria from the blood—is very significant. The bacteria are simply washed into the circulation and are not increasing and multiplying there. It depends on whether the focus of infection is so located that the bacteria are readily carried into the blood stream.

DR. E. LIBMAN agreed with Dr. Welch that in most cases the bacteria are swept into the circulating blood stream and that multiplication there is not frequent. The mastoid cases are a most instructive example of this view. He had a series of cases showing prompt disappearance of the bacteria from the blood after ligation of the jugular vein; they disappeared entirely in two days after ligating the vein. What we are dealing with generally is an invasion of the blood current and not a multiplication there; not a true septicemia.

Obstruction of Superior Vena Cava in Exophthalmic Goiter.

DRS. C. G. STOCKTON and A. E. WOCHNERT, Buffalo, reported a case which was rather unique in the history of this disease—a thrombus in the vena cava, and a very extensive one. The thrombus occurred about a month before death, beginning in the right subclavian and extending through the innominate. There was no explanation. Other cases have not been found in the literature after a very careful search.

DR. JACOBI, New York, asked if the thyroid was large enough to interfere with the venous circulation.

DR. STOCKTON replied that it was enlarged but it did not enter into the obstruction. From the beginning of the thrombus to the end it could be followed.

Relation of Auditory Area to Aphasia.

DR. ADOLPH MEYER, New York, said that Nature's experiments with man are largely injuries, vascular lesions and the like, that is, coarse interference almost inevitably subcortical as well as cortical. Similarly the convolutional patterns commonly used in descriptions fail to allow sufficiently reliable specifications. Descriptions are especially loose, and therefore interpretations are difficult in respect to the temporal lobe in which the essential receiving station is hidden. The study of the cases of sensory aphasia in the collection of the Pathological Institute of the New York State Hospital show: 1. The possibility of easy and efficient reconstruction from serial sections rendering accurately the relation of the lesions to both the fiber paths and especially also to definite cortical areas which are as easily demonstrable in the adult as with Flechsig's method in the infant's brain. 2. The probability that the extent of the lesion of the narrower auditory zone (the transverse temporal gyri) and its fiber goes parallel with the extent of auditory word imperception.

Pathology of Exophthalmic Goiter.

DR. LOUIS B. WILSON, Rochester, Minn., included in this paper an analysis of the gross anatomy and histology of glands in each case, and the percentage of recurrence of various phenomena. The cases were grouped from a pathologic standpoint into two series: Series 1, those showing marked increase of the total number of parenchyma cells within given alveoli. Series 2, those showing an increased number of alveoli only without extra alveolar increase. Series 1 was again divided into four groups according to development of process; Series 2 was divided into four parallel groups in similar manner. The relationship of these series to each other was considered and of each group to the clinical histories of the patients. The clinical groups were approximately parallel to the pathologic groups. The various hypotheses of function perversion in this disease as examined in the light of the author's cases were discussed and a combination of the several hypotheses proposed which would seem to explain the data of the present series of cases and of cases reported by other observers.

Erythromelalgia and Raynaud's Disease in Relation to Vascular Diseases of Extremities.

DR. B. SACHS (in association with Dr. L. Buerger), New York, from a study of twenty cases attempted to show that these disorders can not be maintained as distinct clinical entities; that they constitute in the majority of instances symptom-groups merging into one another and often representing varying degrees of the morbid process in the blood vessels. Dr. Buerger's studies on the pathology of the blood vessels in these conditions prove that the pathologic process is not an obliterating endarteritis, but an obliterating thromboangeitis.

The Intraventricular Systole.

DR. H. A. STEWART, Baltimore, said that the development of pulmonary insufficiency when there is an increase of the pulmonic pressure, and its disappearance with a readjustment of the pulmonary circulation, point to the important action which the pulmonary musculature must have in maintaining the competency of the valves of the artery. In the case of the aortic orifice, while it is not common, it is by no means rare to note the disappearance of a diastolic murmur with an amelioration of the cardiac action. Clinically the latter has been noted in cases of exophthalmic goiter, and experimentally in dogs when a diminution of the cardiac tone is produced. In view of these facts a study has been made of the action of the ventricular musculature surrounding the aortic orifice in dogs, in order to determine to what extent the valvular competency was dependent on muscular action. For this purpose an instrument was devised by which the contraction of the ventricle internally could be recorded. The approximation of the opposing walls of the ventricle, at different points from apex to base, were noted. Special study was made of the sphincter-like muscle which surrounds the aortic outlet. The investiga-

tion showed that the cavity of the ventricle is contracted first at the apex, the contraction passing upward toward the base. The contraction at the outlet appeared to be more complete than elsewhere. The contraction of the muscle mentioned above, viz., the aortic ring muscle, is prolonged into diastole.

DISCUSSION.

DR. W. S. THAYER, Baltimore, called attention to the fact that Dr. Stewart, by a series of other experiments, has confirmed the work reported, taking the record of the contraction of the heart muscle by an ingenious little instrument, and getting the same results, showing prolongation of the contraction of the aortic ring muscle into diastole.

Anemia in Children.

DR. M. H. FUSSELL, Philadelphia, reported three cases. The first patient, male, aged 13 months, was only child, and during life had intestinal disturbance; at about eight months the child began to get pale and a tumor in the abdomen was noticed. It died suddenly during an attack of vomiting. At autopsy all the tissues were extremely pale but with the exception of enlargement of the mesenteric glands and spleen there was nothing else; there was hyperplasia of the spleen and lymphatic glands. The second patient, female, aged 7, vomited blood a number of times and had been for some time weak and pale. She had all the physical signs of ordinary anemia, with enlarged heart; probably a septic condition. The child died after a large hemorrhage from the stomach, before which blood examination showed 20 per cent. hemoglobin; 1,275,000 reds, 6,000 whites. At autopsy the liver was found large, pale and pinkish in color and one branch of the hepatic vein closed with a thrombus. The third child was sick three months; pale, yellow color; he could get no history. Spleen was extremely large; liver half way between the xyphoid cartilage and umbilicus. Hemoglobin 20 per cent.; 1,600,000 reds. This patient developed further anemia and died. The bone marrow was pale and made up of large cells with granular protoplasm and a vast number of small lymphocytes. Malpighian bodies were small.

Status of Serum and Vaccine Therapy.

DR. MARK W. RICHARDSON, Boston, under the general consideration of this subject reviewed the history of antitoxins, bacteriolysins, anti-endotoxins, opsinins, vaccines, filtrates and residues, giving a résumé of the treatment of bacterial diseases with homologous sera and bacterial products.

The Therapeutics of Self-Repair.

DR. S. J. MELTZER, New York, said that numerous facts in biology justify the conception that the living organism represents a mechanism and is in many respects comparable to a complex human-made machine. The efficient repair of a mechanism justly presupposes a familiarity with its normal structures and construction, and also a complete understanding of the nature of the disorder. The actual extent of knowledge of the living machine it must be admitted is very small and is only an infinitesimal fraction of that knowledge which would enable physicians to comprehend it as a competent engineer understands the human-made machine. While no man would be permitted to meddle with serious disorders of the human-made machine with only a fraction of knowledge of its conception, yet with the disorders of the mechanism of life for thousands of years millions of men have meddled, with a knowledge infinitesimally small indeed even when compared with the present understanding of the processes of life and their disorders. With just regard to therapeutics the living animal body ought not and could not be compared with an artificial machine. No machine has yet been invented which can automatically repair its own disorders, but the living organism is well provided with such automatic arrangements for self repair. He said two methods of treatment competed in the past in the domain of internal medicine, the rational and the empirical, the former possessing only negative virtues, leading essentially to inactivity, the latter satisfying its followers by the activity which it inspired. Many ailments and diseases terminate spontaneously in recovery; therefore, it is evident that the animal organism must possess means and methods by which it accomplishes these recoveries. Dr. Meltzer said he feared that the study of immunity is not yet appreciated even by some of the leading pharmacologists. It is a good thing that the antitoxins were discovered; here is something which physiology can not claim as its own and pathology has not yet laid hands on. Here is something which the body in its efforts at defense and repair evidently manufactures anew. The present tendency in pathology is to consider every symptom as a manifestation of the efforts of the organism for defense and self repair. All the signs of inflammation are considered as factors in self repair. The various attempts to influence favorably the course of infectious diseases by the artificial production of leucocytosis is another venture to utilize therapeutically one of the methods of defense and self repair employed by the body against inflammation. Fever is another which is now being tried by various investigators as a curative agent. He referred to the experiments of Opie in which tuberculosis of the pleura and lungs of dogs is cured or greatly mitigated by the intrapleural injection of sterile pus obtained from another animal. Learning the methods of Nature should not imply that they are to be followed blindly; on the contrary, they should be improved on. In studying self repair Nature strives only to avoid death; the physician has an additional duty—to make life bearable. Among the new creations he mentioned the antitoxins, bacteriolysins, anti-endotoxins, agglutinins, precipitins and coagulins.

Dietetic and Hygienic Therapeutics.

DR. DAVID L. EDSALL, Philadelphia, said that in recent years there has been a growing tendency to rejoice in the condemnation of drugs, and that the majority of young men of moderate training believe they can not get the results with dietetics and hygiene that they can with drugs; and this is because they have learned to administer drugs more rationally. He thinks that in the majority of cases the attending physician does not give rules for hygienic conduct in the treatment of disease, as for instance, in the care of typhoid fever—giving instructions for the preparing of food for other members of the family. The question of drugs is presented in such a way that the student has an intelligent reason for employing them; hygienic therapeutics, on the other hand, comes only from experience and the gathering together of material gradually. The students should be taught in regard to diet and hygiene that it is not so necessary to learn a large number of new facts as to correlate and put in practice the ideas they have gained from the study of physiology and etiology. They are too apt to overlook the commonplace. Most text-books say simply that the dietetic and hygienic treatment is not to be neglected, but fail to say what this treatment is. He deprecated the way in which prepared foods are used without any knowledge of their food value; the exact value of drugs is much better understood.

Organotherapy.

DR. REID HUNT, Washington, D. C., said that this is one of the oldest forms of therapeutics, but it was only after the subject began to be studied scientifically that any results were obtained. He thinks that what is now called organotherapy will in a few years be called simply drug therapy because of the similarity of the hormones to ordinary drugs. The present tendencies in organotherapy are along three lines: first, more thorough study of the rôle of these hormones in the body; second, to obtain them in form suitable for therapeutic purposes; third, efforts to influence the hormones in the body itself. A proper definition of organotherapy, he said, is the utilization of that group of internal secretions called hormones. It has been shown that the fetus produces some secretion which leads to development of the mammary glands and the formation of milk. Evidence is clear that the ovary has two or more internal secretions, and that the corpus luteum produces a secretion necessary for the fixation of the embryo to the uterus. Two hundred and sixty-seven organotherapeutic preparations are described in medical literature and advertised in the journals, and the list does not differ much from those in vogue a century ago. The parathyroid has undoubtedly a marked effect in tetany produced by removal of the thyroid. Encouraging results have also been reported from the secretion

of the pituitary body. New uses have been found for some of the preparations, as for instance, the thyroid in rheumatism. Suprarenalin has been used as an ordinary drug rather than as an organic product; in the only disease in which there is lack of adrenalin secretion, Addison's disease, it does not seem to be of much value. Many of these products can be made synthetically. He said that there is no standard at present for the commercial thyroid, some preparations having a much larger iodin content than others.

Psychotherapy.

DR. L. F. BARKER, Baltimore, gave a brief historical résumé of the subject and discussed the advantages and limitations of the psychotherapeutic methods in vogue at present and the outlook for their further development. He said that any influence which exerts a psychic effects also exerts a physical one so that psychotherapy is also physical therapy, but medical psychiatry knows nothing of telepathy or hypnotism. When one thinks of the many drugs vaunted for a time and then disappearing, he must believe that there must have been a strong psychic effect produced by them. The psychotherapy of persuasion rather than of suggestion has been revived. Isolation is of the greatest importance and he called attention to the fact that the idea of isolation in disease arose in antiquity with the anchorites. The psychoneuroses are the most promising diseases for psychotherapy and any intelligent man may gain an insight into these disorders and give relief by this form of therapy. Its limitations are definite, but its field is broad and the future will reveal great opportunities. Unfortunately, psychotherapy has had in the past such a yellow streak that many medical men have refrained from employing it. Its use should always be preceded by definite diagnosis.

Radical Cure of Chronic Constipation by Psychotherapy.

DR. IRVING P. LYON, Buffalo, said that chronic constipation is generally looked on and treated as a local disease of the intestines; that this view is erroneous, and if strictly followed leads to failure in treatment. He considers that chronic constipation is generally a simple psychoneurosis—a mental habit or conviction of constipation, by which the normal innervation of the intestine is obstructed or altered. This altered innervation does not necessarily lead to either a tonic or an atonic condition of the bowel. While such forms might sometimes be clearly marked, usually no change of innervation is evident, but rather merely a habit of uncontrolled irregular action. This faulty control is intensifed by dependence upon cathartics. In the treatment the physical basis of the disordered function should be recognized, emphasized and utilized. Drugs and special local measures should be regarded as unnecessary if not positively harmful. The patient's mentality or conviction of constipation should be changed at once, and at the first interview the patient should leave the doctor's office thoroughly convinced that constipation is merely a faulty habit that can be immediately overcome. Various accessories or natural stimuli to normal function at regular times should be utilized, especially at first. The cure should be established as a rule within a few days, often on the first day, seldom requiring more than a week or two.

Medicolegal

Sufficiency of Description of Injuries.

The Supreme Court of Wisconsin says that the plaintiff in the personal injury case of Hoffmann vs. Eastern Wisconsin Railway & Light Co., in a release which she executed a few days after the accident, stated that the injuries claimed by her as "being right limb contusion, head struck, shook up badly, and, further, by reason of said accident and collision I was otherwise bruised and injured." About ten days after the accident she commenced to feel a severe pain on her right side. She was examined by her physician and treated for some months to allay inflammation, when it was diagnosed as a trouble with one of her ovaries, and an operation was had, whereon the right ovary was found to be inclosed by what the doctor called a blood tumor, and to be seriously inflamed, so that it was necessary to remove it. The only question in the case was whether the release by its words covered the condition of the ovary, so as to have released damages therefor.

It seems to the court clear that the very specification of the injuries received, whether they limited the general words of release or not, sufficed to include all that for which the plaintiff sought recovery.

It was not necessary for the court to look in the specification for a description of the blood tumor or encysted ovary which the surgeons found in the plaintiff's body, necessitating the serious operation which they described, if the court found fairly included the direct injury to her body which, by natural processes of development, produced that result.

The words of particularization were: "The right limb contused, head struck, shook up badly, and, further, by reason of said accident and collision, I was otherwise bruised and injured." The attempt of the plaintiff apparently was to confine these words to the contusion of the right limb and the scalp wound; but the fact that the plaintiff was shook up badly was just as much particularized, and that she was otherwise bruised and injured apart from those particular bruises. The evidence disclosed that she was bruised about the abdomen in such a place as to be likely to have injured the ovary or any one of several of the internal viscera; also that rupture of blood vessels about the ovary might have resulted from the jar or shock; in short, from being "shook up," as the release said. It was claimed that these words must be deemed to refer to external injuries and not to internal; but the court thinks unreasonably, for every bruise causes more or less of internal injury.

The court's conclusion is that by the very terms of the release was described the injuries which the plaintiff received.

Death from Disease Following Physical Injury—Meaning of "Bodily Infirmity," "Sound Condition" and "Bronchitis"—Physician's Testimony.

The Supreme Court of Wisconsin says that the insured in the case of French vs. Fidelity and Casuality Company of New York held an accident policy which insured him "against bodily injuries sustained through external, violent and accidental means," and stipulated that, "if death shall result from such injuries within ninety days, independently of all other causes, the company will pay the principal sum of five thousand dollars." It was urged on behalf of the company that it did not appear that the death of the insured was the result of "bodily injuries sustained through external, violent and accidental means independently of all other causes." The proof was undisputed that the insured received an accidental injury to his leg causing an abrasion of the skin, that an infection started at this place, and that he died fifteen days later from erysipelas or blood poisoning. The contention was that the accidental injury of itself would not have resulted fatally, but that death was due to an independent intervening cause, namely, the germs which entered the system through the wound. It must be apparent, however, that but for the accidental injury there would have been no cause for infection; that, but for the abrasion, the disease germs could not have entered and produced the fatal result. The wound produced by the accident was, therefore, the proximate and sole cause of death.

The court must hold that where death results from disease which follows as a natural, though not the necessary, consequence of an accidental physical injury, it is within the terms of the accident policy; the death being deemed the proximate [the word proximate is here used in its legal sense.—ED.] result of the injury, and not of the disease as an independent cause.

There being a warranty by the insured to the effect that he never had any bodily infirmity, that he was in a sound condition physically, and that he never had bronchitis, the court says that it must be presumed that the parties intended that the words should be understood in their ordinary sense when used in common speech. Bodily infirmity means a settled disease, an ailment that would probably result to some degree in the general impairment of physical health and vigor. It could

not have been understood by the parties that by this statement the insured intended to warrant that during the 65 years of his life he had never suffered from any of the ills that human flesh is heir to. Temporary ailments from which there has been a full recovery, and which leave no perceptible effect, could not reasonably be included in this term. Bodily infirmity as used in an accident policy exempting the insurer from liability only includes an ailment or disorder of a somewhat established or settled character, and not merely a temporary disorder arising from a sudden and unexpected derangement of the system. A sound condition physically signifies an absence of bodily infirmity, and what has already been said applies to this statement. A sound condition physically means the same as sound health, which does not mean perfect health. Whether the insured was in a sound condition physically would depend on the circumstances of each case, and would be a question for the jury to determine on the evidence.

Nor can the court agree with the view of the trial judge that the proof in this case established beyond controversy that the insured had ever had chronic bronchitis, or that, if he had been so afflicted by the disease in an acute form, the policy was necessarily avoided. The object of the parties was to insure against disability or death from accidental injury. The present physical condition of the insured as affected by previous diseases was a natural subject of inquiry as bearing on the character of the risk and as tending to increase liability to accidents or of serious results from accidents. The information was doubtless sought and furnished with that purpose in the minds of both parties. Bronchitis, as a medical term, is defined by Webster as "inflammation, acute or chronic, of the bronchial tubes or any part of them." If the term is given its broadest significance, bronchitis would include every hard cold that affects the bronchial tubes, or any part of them.

The court can not assume that it was the intention of the parties to use this term in its broadest sense, as it would lead to results which are unreasonable, if not absurd. Such a construction should not be adopted unless enforced by the words employed. The court concludes that the word "bronchitis," as found in this policy, was used in its limited sense as meaning a chronic disease which would not readily yield to treatment, and which tended to impair the health and strength of the insured; that it did not include an acute attack from which he had fully recovered at the time the policy was accepted.

The testimony of the attending physician left it somewhat uncertain whether the disease had become so pronounced and settled as to permanently affect the health at the time the policy was accepted. Two other witnesses intimately acquainted with the insured, and who saw him almost daily for months before and after that date, had never heard of his having bronchitis, and testified, in substance, that he attended regularly to his work, and that his general health was good. It is presumed that, if the disease had become settled so as to impair the strength and health of the insured, it would have been perceptible to ordinary observation.

The testimony given by the attending physician would doubtless have been excluded if seasonable objection had been made. As it was received on the trial without objection, it was entitled to full consideration, but should not have been accepted as conclusively establishing the existence of the disease. The question should have been submitted to the jury on all the testimony on the subject

Original Wound Causes Death.

The Supreme Court of Nebraska says, on the appeal of Hamblin vs. State, that Hamblin shot a young woman, the ball entering the back of the region of the eighth or ninth dorsal vertebra, penetrating the spinal column, severing the spinal cord, and becoming buried and lodged in the anterior portion of the bone. This wound produced immediate, total and permanent paralysis of the whole of that portion of the body below it.

The woman was taken to a hospital where the surgeons, not being able to definitely locate the ball without making an incision, applied the *x*-ray, by which the location of the ball was determined, and an effort was made to extract it by enlarging the wound and chipping off and removing the fractured bones. It was discovered that the ball had passed through the spinal cord, completely severing it, and had become embedded in the bones of the inner portion of the spinal column. As the ball could do no further harm, it was permitted to remain.

The wound healed up, and, except as to the paralysis of the lower parts of the body, gave but little trouble. The vital organs performed their functions naturally, food was taken and digested, but, the intestines and bladder being rendered inactive, it was necessary that evacuations should be produced by artificial means. The bladder was relieved by the insertion of a glass catheter two or three times each day. After the healing of the wound in the back, the victim suffered little, if any, pain.

About four months after the shooting, while an attendant was using the catheter, it was, by accident, broken in two, and the severed end, about 2½ inches long, remained in the bladder. This was allowed to remain for some time, probably eight or ten days when it was removed by an operation which consisted of making an incision through the wall of the body and in the bladder. At that time bed sores had appeared upon the body; some of them having become gangrenous and the flesh sloughing off, others showing the discoloration caused by ecchymosis. The wound made in removing the broken catheter never healed, and soon thereafter the victim began to fail rapidly, and died about six weeks after the breaking of the catheter.

One of Hamblin's defenses was that the victim died, not from the effects of the wound caused by the ball, but that the cause of her death was the accident in breaking the catheter, and allowing it to remain in the body until inflammation and gangrene were developed to such an extent as to cause the death. In other words that a new and independent cause, itself producing death, intervened.

But the court holds that there was sufficient evidence to show that the gunshot wound was a mortal one, and that there was no escape from death therefrom, but that the exact time which the patient would live could not be stated. The lower portion of the body being paralyzed, a steady and continuous degeneration would follow, owing to the failure of nerve force and circulation, and recovery was impossible. At the time of the accident portions of the body had already sloughed off, and ecchymosis was visible in many places. This being true, the fact that the accident, and probably subsequent unskilful treatment, may have contributed to and even hastened death, would not relieve the accused from the criminality of his act, if it were criminal.

Where a mortal wound is unlawfully inflicted by one person upon another under such circumstances that, if death had immediately ensued, it would have been a felonious homicide, the fact that other causes, such as error or accidents in the treatment of the victim, may have contributed to or hastened death, will not relieve the accused from the criminality of his act; the real cause of the death being the felonious assault.

Current Medical Literature

Medical Record, New York.

May 30.

1 Case of Melena Neonatorum Cured by Transfusion. S. W. Lambert, New York.
2 *Differential Diagnosis of Meningococcus Cerebrospinal Meningitis from Other Types of Cerebrospinal Meningitis. H. W. Berg, New York.
3 A Plan for Reducing Infant Mortality in New York City. W. C. Phillips, New York.
4 *Correlation of Eyestrain and the Functional Neuroses. H. E. Smith, Norwich, N. Y.
5 Disturbances of Gastric Secretion. M. Gross, New York.
6 *Drainage of Wounds. R. W. Knox, Houston, Texas.
7 Ocular Tuberculin Reaction. T. B. Sachs, Chicago.

2. **Meningococcus Cerebrospinal Meningitis.**—Berg says that the diagnostic recognition of meningococcus cerebrospinal meningitis resolves itself into (1) the differentiation of this disease from a pseudomeningeal symptom-complex of toxic origin; (2) its differentiation from other types of cerebrospinal meningitis, be they bacterial in origin or those complicating organic cerebrospinal lesions. The essential symptoms necessary for the differentiation of cerebrospinal meningitis from toxic pseudomeningitis are numerous: Constitutional symp-

toms, chills, fever, slow pulse, temperature high or low, respiration slower than would be expected when temperature is high. Symptoms due to inflammation of the cord and meninges are stiffness of neck, opisthotonos, pain in spine, and extremities, surface hyperesthesia, difficult and frequent urination, constipation or diarrhea, incontinence of urine and feces; Kernig's symptom (the most valuable and reliable one that we have in cerebrospinal meningitis), skin eruptions and joint troubles, diminution of patellar and skin reflexes. The Babinski reflex is extremely unreliable. The symptoms due to inflammation of the brain and medulla and their meninges, and neuritis of the cranial nerves are: headache, slow pulse, hydrocephalic cry, tache cérébrale, vertigo, convulsions, delirium, coma, coma vigil, Cheyne-Stokes respiration, photophobia, inequality, dilatation or contraction of the pupils, ptosis, strabismus, optic neuritis, choked disk, atrophy of the optic nerves, iritis, iridochorioiditis, keratitis, conjunctivitis, panophthalmitis, deafness due to neuritis of the auditory nerve, paralysis of the facial and other cranial nerves, hemiplegia, monoplegia, paraplegia, and diminished or absent conjunctival reflex. Blood symptoms are an increased leucocyte count, chiefly affecting polymorphonuclears. The absolutely distinctive symptom, however, is the finding of the diplococcus by lumbar puncture. The cytologic examination of the fluid is important usually showing 90 per cent. polymorphonuclear leucocytes and 10 per cent. uninuclears. A large number of the symptoms are not present until the later stages, while many of the earlier symptoms are duplicated in toxic pseudomeningeal conditions. When the case is one of toxic pseudomeningitis the fluid obtained by lumbar puncture is sterile and clear. Microscopically a purulent turbulent fluid speaks for meningococcus cerebrospinal meningitis. A comparatively limpid, clear fluid containing flocculi, or fibrinous shreds, or a slender, white, coagulated column branching out at the top and base like a slender pillar supporting a capital, in a test tube half filled with clear cerebrospinal fluid, indicates tuberculous meningitis. It does not do to rest on these appearances however.

4. **Eyestrain and the Functional Neuroses.**—Smith epitomizes his paper as follows: The ocular conditions which give rise to eyestrain may be refractional, accommodative, or muscular. The result is loss of neuricity. The effects are remote and reflex, and may be expended on any organ, group of organs, the nervous system as a whole, or its separate divisions. It is the little refractional errors which give rise to the greatest trouble; poor vision and eyestrain are not concomitant conditions, but exactly the reverse. It is imperative to have the eyes of all children of school age examined under atropin; not only may health and comfort be conserved, but their whole future may rest on this simple thing. Refractional errors of high degree should be corrected, not because of any reflex disturbances, but to save the eyes from disease and to give their possessor better vision. The investigation of all obscure nervous phenomena should begin with the eyes; often it will be necessary to go no further. Typical sick headache is pathognomonic of eyestrain; if it is not cured, in 99 per cent. of the cases it is the fault of the refractionist. Finally, the disease can not be cured unless the remedy is applied. Nearly right glasses will surely aggravate the symptoms, and relief can be obtained only by mathematically correct lenses in mechanically perfect settings.

6. **Drainage of Wounds.**—Knox says that gauze and drainage tubes are excellent agents when indicated on account of the nature of the wound, but he advocates as the safest, best, and most effectual and unvarying measure in its results as a means of getting perfect drainage, the use of moist heat. The temperature of the dressing should be kept evenly and continuously about 125 F.

Boston Medical and Surgical Journal.

May 28.

8 *The Hospital in Relation to the Community. A. Post, Boston.
9 Case of Intravesical Cyst of the Ureter; Dilatation of the Ureter, with Very Slight Dilatation of the Renal Pelvis and Containing 28 Movable Calculi; Bacteriuria; Alkaliuria; Phosphaturia. E. A. Codman, Boston.

8. **The Hospital and the Community.**—Post describes the purposes of the hospital as (1) for the care of the sick; (2) for the protection of the community; and (3) as an institution of learning, not only for the education of undergraduates and postgraduates and of nurses, but also of the public in regard to hygienic habits and general principles. He discusses these points in detail. He urges the importance of the pathologic laboratory, and says that the function of the pathologist is not generally understood by the public. It is much broader than the mere examination of the dead body or morbid products, for it is through his work that the greatest modern advances are made. He points out for his lay audience that an autopsy is entirely separate from vivisection and demonstrates that education in regard to disease is impossible without autopsy. The dead body, formerly a living patient, becomes transformed into a relentless judge of the rectitude of the deductions made and the propriety of the methods used. Step by step the pathologist lays bare the details of disease hitherto hidden, and dictates to his staff the account which must forever stand by the side of that previous record made during life. The autopsy thus becomes the greatest critic in enforcing careful and thorough work on the part of the physician. A single autopsy is not enough, however, but a series of them is required, so that comparison and tabulation may bring out truths not evident from a single examination. He looks forward to a time when hospitals shall be given the right to postmortem examinations under certain restrictions. He describes the education of nurses and the effect of the training school in elevating the nursing profession. The presence of students in the wards he regards as a safeguard for the patient, by providing the physician with a critical audience tending to enforce care and accuracy in his work. He describes the method of administration of hospitals and speaks of the duty of the community, and especially of patients, toward the hospital.

New York Medical Journal.

May 30.

10 Management of Self-Limited Disease. W. B. Konkle, Montoursville, Pa.
11 Conditions Affecting the Proportions of Fat and Proteins in Cow's Milk. L. L. Van Slyke, Geneva, N. Y.
12 *Gonorrheal Rheumatism Cured by Seminal Vesiculotomy. E. Fuller, New York.
13 *The Kidney in Acute Infections. J. B. Huber, New York.
14 *The Jungle Plant (*Combretum Sundiacum*). W. D. Silkworth, New York.
15 Extraction of Cataract in Capsule. W. B. Marple, New York.
16 Operation for Advanced Ectopic Gestation Associated with Fibromyomata of Uterus. S. E. Tracy, Philadelphia.
17 *The Bladder in Tabes. J. B. Squier, New York.

12. **Gonorrheal Rheumatism.**—Fuller refers to his former articles recommending seminal vesiculotomy in gonorrheal rheumatism, and states that up to Feb. 1, 1908, he has performed the operation of seminal vesiculotomy 101 times without a death—23 times for the relief of gonorrheal rheumatism. In all the 23 patients the operation has had a profoundly beneficial effect on the rheumatism. All have left the hospital well or in a greatly improved condition. In all these patients there was a seminal vesiculitis to account for the focus from which the systemic absorption originated. Out of the 23 cases 17 patients were cured as a direct result of the operation and were well when last seen. Fuller has endeavored to exclude tuberculous cases by the use of the ocular tuberculin and tuberculin reactions. He would not operate if tuberculosis were present. He considers that his cases establish the efficacy of this form of treatment. He reports eight cases.

13. **The Kidney in Acute Infections.**—Huber discusses the pathologic influences bearing on the kidneys, their functions, the internal secretion of the kidney, the symptomatology and the pathologic changes. He describes Cabot's investigations and their effects in diagnosis. In regard to treatment he takes exception to the intemperate advice to drink as much water as possible, "gallons of it," with the idea of flushing the kidneys. The patient should drink as much as he desires and can comfortably dispose of, but to force fluid on him in unlimited quantities is a mistake, for it throws extra and unnecessary work, not only on the kidneys, but on the heart. It would be better to ease the kidneys by stimulating the other emunctories

—by diaphoresis and hydrotherapy, even by proctoclysis, though this would not materially lessen the cardiac and renal strain.

14. **The "Jungle Plant" in the Opium Habit.**—Silkworth refers to the extensive use of the "jungle plant" (*Combretum sundiacum*) in the Federated Malay States, as a cure for the opium habit. Its use is said to have been discovered by the Chinese woodcutters there. The plant is described by Sir George Young in his "Materials for a Flora of the Malayan Peninsula." Silkworth describes the method of making and using the infusion.

17. **The Bladder in Tabes.**—The indications for treatment, according to Squier, are to keep the bladder absolutely sterile and to re-establish by motor re-education its lost functions. This last is accomplished by passing a catheter each time after urination, drawing off the residual urine, if any, and introducing a measured quantity of a mildly irritating fluid (silver nitrate, 1 in 1,000) into the bladder, the patient making an effort to void it. He must be taught to make efforts at urination at stated times and always to try to evacuate the bladder to the last drop. A stronger solution (grains 1 or 2 to the ounce) may sometimes be instilled into the prostatic urethra with beneficial results. The vesical spasm is best relieved by passage of a cold sound. The patient's instruction in catheter sterilization is of the utmost importance.

Lancet-Clinic, Cincinnati.

May 23.

18 Pernicious Anemia. J. E. Grelwe, Cincinnati.
19 *Early Diagnosis of Cancer of the Uterus. R. B. Hall, Cincinnati.
20 Clinical Teaching of Surgery. J. U. Barnhill, Columbus.
21 Clinical Study of the Female Pelvic Muscles and Rectum. C. T. Souther, Cincinnati.
22 Prophylaxis and Treatment of Gonorrheal Conjunctivitis. M. Behrman, Covington, Ky.

19. **Cancer of Uterus.**—Hall urges the importance of early diagnosis, and gives some suggestions to aid in making it: Make a careful clinical history, omitting no detail regarding menstruation, discharge or odor. An offensive odor does not begin until the tissues are breaking down. Irritable bladder is an early symptom. Have an investigation on the occurrence of any unusual symptom during the cancer period. Cancer of the cervix, if present, will almost certainly be detected early, by examination. Cancer of the body is rare during menstrual life, and is more prevalent in women who have not borne children. The most common form is adeno-carcinoma. The progress of the disease at first is very slow. After the cessation of menstruation a watery discharge may set in; this becomes colored after a time. Backache and pain may be complained of, but the patient does not consider herself an invalid. In ten or twelve months the uterus will be enlarged. Such patients are often sent to the gynecologist as suffering from fibroids, but fibroids do not begin after the menopause, and if the patient had a fibroid before, the history of the last few years of menstrual life would indicate it. Hall has detected malignant disease of the fundus with the curette when only a small area has been involved. Epithelioma of the body of the uterus is the rarest of growths.

American Journal of Obstetrics, New York.

April.

23 *Significance of Pain in Pelvic Disease. E. Novak, Baltimore.
24 *Diagnosis of Non-puerperal Pelvic Diseases. H. J. Boldt, New York.
25 *Etiology of Acute Nonpuerperal Pelvic Infection. C. R. Hyde, Brooklyn, N. Y.
26 *Treatment of Non-puerperal Infections of the Pelvis. F. R. Oastler, New York.
27 Case of Impacted Breech Presentation Treated by Hebotomy. R. H. Pomeroy, Brooklyn, N. Y.
28 Temporary or Apparent Disproportion Between the Fetal Head and the Maternal Canal. M. McLean, New York.
29 *Disproportion Between the Fetal Head and the Maternal Pelvis and Its Management. J. D. Voorhees, New York.
30 Ectopic Pregnancy in Stump of Excised Tube, Causing Attacks of Intestinal Hemorrhage. H. N. Vineberg, New York.
31 Ear Disease in Infancy and Childhood. J. A. Kenefick, New York.
32 Use and Abuse of Salt Solution. E. A. Ballock, Washington, D. C.
33 *Chloroform versus Ether at Columbia Hospital for Women. T. Abbe, Washington, D. C.

23. **Pain in Pelvic Lesions.**—Novak, while not minimizing the importance of careful physical examination in pelvic disorders, says that a consideration of the character and distribution of the pelvic pain will often yield interesting and suggestive information. The nature of the disease should be ascertained, and not merely the advisability or otherwise of operation. The pain of pelvic disease is in a general way governed by the same laws that apply to the causation of pain in other viscera. One of the dangers of neglect of pelvic disease is the possible development of neurasthenia, with diffusion of pain to other parts and appearance of characteristic symptoms. The persistence of this neurasthenia is one cause of the continuance of unpleasant symptoms after operative measures. Hysteria manifesting itself by pelvic symptoms presents the same characteristics that distinguish it elsewhere. The removal of normal ovaries for pelvic pain is theoretically unjustifiable and clinically useless. So-called fibrocystic ovaries are frequently found in women in perfect health, hence caution must be used in attributing pelvic pain to such a condition. Intervention, if made, should be conservative rather than radical. "The gynecologist must learn to look on pain as the resultant of two factors, the lesion and the patient, and in order to arrive at an intelligent appreciation of the true signficance of pelvic pain, he must study both these factors with equal fidelity."

24. **Diagnosis of Nonpuerperal Pelvic Infections.**—Boldt says that it is not always possible to palpate the tubes. He describes various manipulative "wrinkles" in palpation, etc. The recto-vagino-abdominal method should never be lost sight of. It often gives success in diagnosis when other measures fail. Hydrosalpinges are always of secondary formation. The mesosalpinx has considerable bearing on the outline of a hydrosalpinx. The abdominal two-thirds of a tubal tumor may be located anywhere within the pelvis. The mobility depends on the extent and firmness of existing pelviperitonitic adhesions. In hydrosalpinx the tubes are seldom sensitive on bimanual examination. When they are it is due to local peritonitis. A large hydrosalpinx may be mistaken for an ovarian cyst, a not infrequent error, especially if the evolution of the hydrosalpinx is intraligamentous. In the event of extensive pelvi-peritonitis all the organs may become so matted together that a differential palpation is impossible. A pyosalpinx may so simulate a tubal pregnancy that no differential features can with certainty preclude error; this is especially true in some cases of tubal abortion. When an appendicitis calls for differentiation from a right-side salpingitis we must rely chiefly on objective symptoms, subjective symptoms being similar. Marked sensitiveness, however, with exudate in the iliac fossa, in addition to the objective symptoms of salpingitis, renders the diagnosis of a coexisting appendicitis certain. An interstitial purulent salpingitis with greatly hypertrophied walls, which has become displaced and then intimately adherent to some part of the corpus uteri, may be mistaken for a small subperitoneal fibroid. The predominating pelvic exudate of puerperal origin is parametric, whereas that of nonpuerperal origin is pelvi-peritonitic. It is always important to elicit a detailed history of any pelvic infection (such as gonorrhea) or of a traumatism from local treatment or a minor surgical intervention. In suspecting a pelvic infection to be tuberculous, tuberculous lesions in other parts should be looked for. Tuberculosis and gonorrhea may be coexistent.

25. **Etiology of Nonpuerperal Pelvic Infections.**—Hyde points out that, though the gonococcus is believed to be the most common cause of pyosalpinx, bacteriologic examination of tubes affected with a chronic or suppurative salpingitis rarely demonstrates its presence But its absence in 80 per cent. of cases is no proof that it should be excluded as a cause. Germs can perish in their own secretions if pent up. While the preponderance of tubal gonorrheal infection is recognized, the streptococcus and staphylococcus must be recognized as important etiologic agents. The *Bacillus coli communis* plays a relatively important part in the production of acute pelvic infection. The author concludes that acute pelvic infection is rarely primary, but more often a sequel of uterine and tubal disease.

26. **Treatment of Nonpuerperal Pelvic Infections.**—This must depend, according to Oastler, on: 1, Variety of bacteria; 2, mode and site of their entrance; 3, region and organs involved. The large percentage of infections being due to the strepto-

coccus, staphylococcus and gonococcus, these receive special attention. Eliminating puerperal infections, unclean instruments and manipulations are the chief means of infection through the pelvis. The treatment calls for: 1, Elimination of the source of infection by cleansing the infected locality by curettage, irrigation and drainage; 2, absolute rest for the part; 3, application of heat or cold to abdomen, followed later by hot douching and tamponing with glycerin as a base. Gonorrheal infection is peculiar in that 1, the inflammatory process almost never involves the general peritoneal cavity, and is, therefore, a local process; 2, the tendency is to become chronic or subacute. In treatment of the local focus of infection—generally the urethra, but may be the Bartholinian glands or the cervix uteri—reliance must be placed largely on (a) rest in bed, (b) proper drainage, (c) applications of silver salts and constitutional treatment, as for acute pyogenic infection, with alkaline sedatives to neutralize the urine. Drugs are of doubtful value. Of infections through abdominal extension the most common is that from appendicitis. The author also discusses tuberculous infection, chronic conditions, prophylaxis and convalescence.

29. **Disproportion Between Fetal Head and Maternal Pelvis.**—Voorhees says that craniotomy in contracted pelvis, if the child is alive, should never be the operation of choice. If the woman is in unfavorable surroundings and is already in such a poor condition after a protracted labor and bad management that infection is certain, the head should be crushed and extracted, even if the child is living. Also, if the child shows signs of dissolution by a rapid and weak fetal heart, if the head has sustained injuries from prolonged traction by the forceps, and if the indications are greatly against its being alive and healthy, a craniotomy should be done. But a crushed head should not be dragged through extreme distortion; a Cesarean section is safer. Symphyseotomy is an operation of the past. With pubiotomy Voorhees has had no experience. All these major operations can be avoided in minor and moderate degrees of pelvic deformity by late induction of labor. But the pelvis must not be too small or the child too premature. The baby should have reached the thirty-sixth week, or preferably the thirty-eighth. The conjugate should be over 8 cm. Voorhees considers the modified Champetier balloon the best and most certain method for inducing labor in any conditions.

33. **Chloroform vs. Ether.**—Abbe considers that on the whole not only is ether undoubtedly safer than chloroform, but that chloroform has no advantage in agreeableness if ether is given by the open method or preceded by nitrous oxid or ethyl chlorid. Yet in certain cases some one factor will overrule the general objections to the toxemia caused by chloroform and give it the preference. For example, in acute inflammation of the respiratory mucous membrane, ether irritation, unless modified by morphin or atropin, is entirely contraindicated; also in chronic inflammatory processes that are likely to be lighted up by ether. Operations on the air passages and mouth call for chloroform and diseased conditions of the blood vessels, atheroma, especially cerebral, aneurism, and plethoric and alcoholic subjects. In obstetrics it is permissible, but it must not be forgotten that even small quantities of chloroform may produce kidney lesion. Ether should be chosen if deep anesthesia is required.

American Journal of Medical Sciences, Philadelphia.

April.

34 *Hygiene of Medical Cases, Particularly in Hospital Wards. D. L. Edsall, Philadelphia.
35 *Nature and Management of Diabetes Mellitus. O. T. Osborne, New Haven.
36 *Importance of Early Detection of Aneurism of the Aorta. H. D. Arnold, Boston.
37 Carcinoma of the Mediastinum Simulating Aneurism. J. Perkins, Providence, R. I.
38 Cardiac Arrhythmia Due to Extrasystoles Originating in the Bundle of His. R. Mackenzie and W. S. Morrow, Montreal.
39 *Reasons Why Cholecystectomy Should Not Be Performed as Frequently as Is Advocated by Many Surgeons. J. B. Deaver, Philadelphia.
40 Perforation of the Gall Bladder During Typhoid Fever; Cholecystectomy; Recovery. A. P. C. Ashhurst, Philadelphia.
41 Diagnosis and Treatment of Syphilitic Lesions of the Nervous System. T. H. Weisenburg, Philadelphia.
42 *The Neurasthenia of Autointoxication. T. J. Orbison, Los Angeles, Cal.
43 *The Indican Reaction as Evidence of Enterogenic Intoxication. H. A. Houghton, Long Island, N. Y.
44 Treatment of Chronic Stenosis of the Larynx and Trachea. J. Rogers, New York.
45 Reaction of the Phagocytes of Elephant's Blood on the Bacilli of Tuberculosis. S. G. Dixon, Philadelphia.

34. **Medical Cases.**—Edsall has been watching the evidence of the transmission of infections of various kinds in medical wards, and is convinced that it occurs much more frequently than is supposed. The system used in medical wards with regard to infectious diseases is much more loose than that used in surgical wards regarding infection. The presence of "carriers" in medical wards requires more attention. His remarks apply to what have hitherto been considered non-contagious, or at most only slightly contagious, diseases. The customary regulations refer to only a few of the infections that may be introduced; they cover only a portion of the means of conveyance, and even that portion does not always consist of the most important sources of infection; for instance, while excreta, bedclothes and food utensils of typhoid patients are covered, the hands of nurses, internes, etc., are not subject to regulation. Then, no one in authority knows whether the regulations are carried out or not. The physician apparently takes less interest in his system than the surgeon does in his. Such improvements as have taken place have been largely due to the initiative of nurses. While isolation reduces the chance of direct transmission, it does not protect the nurses; while important, it is an incomplete solution. Edsall describes some of his experiences with ward infections, and details at considerable length the measures used in his wards to avoid the conveyance of infection, under the following heads: Infection of the food; dangerous results from infected milk; care of milk after delivery; precautions against infecting food in the ward; regulation of the working personnel of the ward; care of the patients' mouths; care of ward utensils; danger of typhoid infection of nurses; danger of typhoid infection of patients; secondary gastrointestinal infections in typhoid patients; outbreaks of diarrhea, hemorrhage and perforation; apparent transference of abdominal complications; the grouping of hemorrhages and perforations; the bearing of these observations on the general conception of typhoid; the transmission of causes of otitis media; infections of the skin; isolation and segregation; placing of infectious cases; danger from pneumonia; isolation and segregation of various other common infections; apparent effects of regulations; protection against flies; division of work among nurses and the more emphatic warning of nurses.

35. This article will be considered in the Department of Therapeutics.

36. **Aneurism of the Aorta.**—Arnold emphasizes the importance of early diagnosis of aneurism of the aorta for the greater possibility of its cure. He summarizes the important points in physical examination as follows: Include in the routine physical examination the determination by percussion of the area of dulness of the great vessels; if one finds an abnormal area of dulness, determine carefully the conduction of the heart sounds in this area; include in the routine physical examination the simultaneous examination of both radial pulses; examine for a tracheal tug in any suspicious case; be especially keen for any evidence by inspection or palpation; and, above all, keep aneurism in mind and remember to examine carefully by all available methods if there is the slightest suggestion in the history or symptoms, or from any physical sign, that an aneurism may exist. Thorough familiarity with the anatomic relations of the aorta to surrounding structures is of very great value. With the exception of the rare cases in which there is trouble with swallowing, the early symptoms of aneurism, manifested by pressure, are usually either pain or disturbance with the respiratory apparatus. The latter may come either from pressure on the air passages or from pressure on the recurrent laryngeal nerve. The symptoms frequently simulate those of heart disease, and their true meaning is learned, partly by failing to find a cardiac condition that will explain the symptoms, and partly by finding evidence of an aneurism. The picture of aortic aneurism in its earlier stages is not uniform, but varies widely with the position and size of the aneurism. There are no pathognomonic signs. The most

characteristic feature of one case may be entirely lacking in the next one. The *x*-ray is of use as confirmatory evidence, and as helping to differentiate aneurisms of the ascending and transverse arches at a very early stage. The detection of aneurism of the arch of the aorta requires no greater skill than the recognition of incipient tuberculosis.

39. **Cholecystectomy.**—Deaver fears that removal of the gall bladder is done too frequently and that the influence of the prevalent teaching in favor of cholecystectomy will be bad. The more gall-bladder surgery he does the less he is inclined to remove the gall bladder. He states his reasons, among which are the following: The gall bladder is more active as a reservoir during the longest interval between eating, which is during the night; it is a most useful organ by way of which to drain in certain septic conditions of the liver and biliary passages; in the absence of the gall bladder and in presence of hepatic emergency the surgeon will be obliged to drain the common duct or the hepatic duct itself—operations which may tax the skill of expert abdominal surgeons. When in doubt drain, even at the expense of a mucous fistula, and though it entail a second operation, rather than remove a gall bladder, which may recover. Mortality from drainage of the gall bladder is less than that attending its removal. The question of postoperative adhesions is a matter of greater moment after cholecystectomy. When only the fundus of the gall bladder is diseased it should be resected and the remaining part of the gall bladder drained. The actual indications for cholecystectomy are hydrops of the gall bladder, cancer limited thereto, and calcareous degeneration and fibrosis, chronic empyema (but in the acute form drainage may suffice), gangrene of the gall bladder, and cases in which the gall bladder, though healthy, contains many small stones that can not be removed or are imbedded in the mucous membrane; but no hard and fast rules can be followed.

42. **Neurasthenia or Autointoxication.**—Orbison considers it proved that the body does form poisons within itself, that they may be found in the urine, bile, venous blood (especially just before it gets to the liver), and in the arterial circulation itself; likewise that these poisons are taken up from the gastrointestinal tract and are constantly in the process of being excreted by the various emunctories. In the healthy man the outgo equals the amount formed, but in the presence of pathologic conditions, especially of the intestinal canal, the latter becomes a veritable culture tube and absorption takes place. The author reports eight cases of neurasthenia attributed to intestinal troubles and cured by corresponding measures. In these cases certain points stand out prominently: The first is a hereditary taint and neuropathic susceptibility. The second is the symptom of fear, in its various phases—so common in intestinal diseases. The third and most important, so far as treatment is concerned, is the constant condition of intestinal putrefaction that has had to be overcome before any relief was achieved; this was in many of the cases associated with insufficient elimination of urine. In cases of this kind there is often a hysterical taint engrafted on the original trouble and this must be considered in treatment.

43. **Indican Reaction.**—Houghton formulates the following working rules with reference to the relation of indican reaction to enterogenic intoxication, which he has used in his own practice very satisfactorily. Urinary indican is a product of intestinal putrefaction. There may be putrefaction without the production of indol, but there can not be indicanuria without putrefaction. A maximum excretion of indican, that is, an amount which on Folin's scale gives an index of 100 or over, may be safely relied on to indicate excessive intestinal putrefaction, and especially the intoxication arising therefrom. A maximum reaction which gives an index under 100 may be significant, but its interpretation should be strictly guarded by the general condition of the patient, that is, by the oxidizing and excretory capacity. A heavy indican reaction which markedly subsides under treatment undoubtedly indicates a lessening intoxication, but minor variations in the color index have no significance at present. No interpretation can be placed on a negative reaction, too many unsolved factors entering into the problem.

Annals of Surgery, Philadelphia.

April.

46 *Direction of the Jejunum in the Operation of Gastroenterostomy. B. G. A. Moynihan, Leeds, Eng.
47 *Transfusion and Arterial Anastomosis. R. Ottenberg, New York.
48 *The Thymus Gland Treatment of Cancer. F. Gwyer, New York.
49 The Parathyroid Glands. N. P. Geis, Brooklyn, N. Y.
50 *Acute Dilatation of the Stomach and Arteriomesenteric Ileus. W. B. Laffer, Cleveland.
51 *Removal of Gallstones from the Second and Third Portions of the Common Bile Duct. F. G. Connell, Oshkosh, Wis.
52 Reduction *en masse* of Strangulated and Non-strangulated Herniæ. E. M. Corner, London.
53 Diagnosis of Renal Disease and Sufficiency. B. A. Thomas, Philadelphia.
54 Multiple and Consecutive Operations on the Kidneys for Calculi. W. W. Babcock, Philadelphia.

46. **The Jejunum.**—Moynihan states that the results of different observers and of different methods of posterior gastroenterostomy show that there is no "natural direction" of the jejunum, and consequently no "best line" for anastomosis. One is, therefore, probably as good as another, provided that no twist be given to the gut at the time of anastomosis. His own choice is for the vertical line, but the main point is to choose for the anastomosis that part of the jejunum which is close to the flexure. This line can be directly approximated to the stomach without the gut being revolved on its longitudinal axis.

47. **Transfusion.**—Ottenberg reports his experiments on animals and describes his technic. He concludes that the chief dangers in transfusion are hemorrhage, thrombosis and narrowing of the lumen. He recounts his clinical experiences in two desperate cases of secondary anemia, in which the immediate results were satisfactory, though both cases terminated fatally from continuation of the orginal disease. He narrates the history of transfusion.

48. **Thymus Gland in Cancer.**—Gwyer reports 16 cases supplementary to those in his former paper (*Ann. of Surg.*, July, 1907), with 6 deaths. He discusses the causes of the fatalities, and realizes that the thymus treatment has not yet in itself proved curative. He thinks that in so complex a condition as cancer we may well look to a combination of remedies for the eventual control of the disease.

50. **Acute Dilatation of the Stomach.**—Laffer closes his article from the March number (Abstr. THE JOURNAL, April 11, p. 1221) with the following conclusions: Acute dilatation of the stomach is very fatal, 63.5 per cent. dying. It is not so rare as the literature would lead one to believe. The pathology and *modus operandi* of acute gastric dilatation and gastromesenteric ileus is not definitely known, but the experimental, clinical and pathologic evidence points to a primary innervation disturbance affecting the gastric nerves or their centers in the brain and cord. It has not been proved that the compression of the duodenum by the root of the mesentery is the primary cause of the so-called mesenteric ileus. The diagnosis may usually be readily made by having the subject in mind, especially where we have the presence of distention, vomiting of large amounts of greenish fluid, no rise of temperature, rapid pulse, great thirst, little abdominal tenderness, and increasing collapse. The passage of the stomach tube will usually establish the diagnosis. Treatment should consist of repeated gastric lavage, even when the patient seems moribund. No food or drink should be given by the mouth, but salt solution, transfusions and nutrient enemata should be prescribed. Patient should avoid the dorsal decubitus position and assume the knee-chest, abdominal and right lateral positions as much as possible.

51. Abstracted in THE JOURNAL, Aug. 31, 1907, p. 794.

Journal of the Indiana State Medical Association, Fort Wayne.

April.

55 *Sponges Left in the Abdomen. An Unusual Case Which Throws New Light on the Subject. M. F. Porter, Fort Wayne.
56 *Treatment of Acne Vulgaris. A. W. Brayton, Indianapolis.
57 Plastic Operations for Elongation of the Sciatic Nerve. J. R. Eastman, Indianapolis.

55. **Sponges in the Abdomen.**—Porter reports a case in which a patient apparently secreted portions of gauze in her vagina

after an abdominal operation, with the view of misleading her family attendant into the belief that they had been left in the abdomen after operation and were escaping through a fistulous opening. Porter uncovered the trick, and reports the case as possibly throwing a side light on the subject of some alleged cases of foreign bodies in the abdomen.

56. **Acne Vulgaris.**—Brayton points to the fact that acne is most prevalent at puberty. At this period the growth of hair on the pubes and other portions of the body indicates an increased activity of the entire pilosebaceous system, parallel to the development of the internal genital organs; the condition being the survival of a period when the whole body was hairy. He discusses the treatment—hygienic, dietetic, medicinal and local—strongly recommending the old mistura acidi ferri, or Startin's solution, in plethoric girls with costiveness, coated tongue and local hyperemia. The mixture is as follows:

℞.	gm. or c.c.		
Magnesii sulphatis	30		ʒi
Ferri sulphatis		65	gr. x
Sodii chloridi	1	95 or	ʒss
Acidi sulphurici dil.....	8		ʒii
Infusi gentianæ q. s.....120			ʒiv

Local treatment he sums up as follows: 1. Wash the face well at night with cold or tepid water and good soap; tincture of green soap is desirable. Open with a sharp lance all pustules, scrape off the acne tops, use the comedon expressor, dry the face and whiten with the white lotion. 2. In the morning flick off the white powder with a soft towel. It is not then necessary to wash the face. Use the ointment of sulphur in the morning if the skin feels dry and harsh in spots or places or apply the lotion lightly if about the house. 3. On going out use the powder as a cosmetic and at night wash the face and begin the treatment again. Trivial as the complaint is, it causes considerable mental distress in young women in consequence of its effect on their personal appearance, and, therefore, deserves more careful attention than is ordinarily given to it.

Journal of the Michigan State Medical Society, Detroit.

April.

58 Carcinoma of the Pancreas. H. M. Joy, Calumet.
59 *Dementia Americana. W. A. Stone, Kalamazoo.
60 Serum Diagnosis in Typhoid Fever. C. M. Stafford, Detroit.
61 Case of Umbilical Hernia. H. B. Garner, Traverse City.
62 Movable Kidney. E. B. Smith, Detroit.
63 *Medical Fallacies. C. B. Fulkerson, Kalamazoo.
64 Plea for More Frequent Curettage Following Labor. C. H. Judd, Detroit.
65 Prostate Gland. E. C. Taylor, Jackson.

59. **Dementia Americana.**—Stone discusses the condition stigmatized by this epigrammatic term, traces its causation to racial and historic causes, and concludes with the following propositions: The degenerate and half-insane should receive recognition as such by the courts. Prisoners of this class should not be committed either to an asylum for the insane or to a penal institution; but there should be schools and institutions especially designed for their detention, care and training. The use of medical experts by the courts should follow the example of Michigan and Connecticut, which provide for the appointment of experts by the judges and their instructions to aid him rather than to be contestants in the case. All criminals should be passed on or examined by an alienist before being sentenced. All prisons and reformatories should be under the supervision and control of alienists and teachers rather than politicians.

63. **Medical Fallacies.**—Fulkerson writes an interesting folklore article on this subject and refers to the need for care and accuracy in the use of scientific nomenclature.

Iowa Medical Journal, Des Moines.

April.

66 Cancer of the Uterus. A. G. Shellito, Independence.
67 Relation of Gynecology to the General Practitioner. J. L. Scripture, Cresco.
68 Surgical Treatment of Displacements of the Uterus. W. R. Whiteis, Iowa City.
69 *Exfoliative Endometritis Complicated by Premature Expulsion of Embryo. L. H. Branson, Iowa City.
70 Bacteriology and Pathology of Syphilis, with a Few of Its Clinical Features. D. F. Crowley, Des Moines.
71 The Public and Private Hygiene of Gonorrhea and Syphilis. L. P. Piper, Des Moines.

69. **Exfoliative Endometritis.**—Branson discusses dysmenorrhea and its causation, and summarizes the differential diagnosis between the casts of exfoliative dysmenorrhea, early abortion and tubal pregnancy. She describes a case showing the difficulty of deciding between a dysmenorrheal cast and the product of pregnancy. Incidentally she believes that the case is suggestive of tubal participation in the function of menstruation.

Journal of the Arkansas Medical Society, Little Rock.

April.

72 Relations Between Physicians and Dentists. P. A. Skeen, Texarkana.
73 Relationship Existing Between Physicians and Nurses. T. F. Kittrell, Texarkana.
74 The Trained Nurse. I. H. Perkins, Texarkana.
75 When to Operate for Gallstones. Report of Cases. W. T. McCurry, Texarkana.
76 Indicanuria. N. Klein, Texarkana.
77 Tuberculosis of the Kidney. J. M. Taylor, Fort Smith.
78 *Importance of Fats in Infant Feeding. C. S. Merriman, Kansas City, Kan.
79 Esophago-Tracheal Carcinoma. J. Z. Sexton, Paragould.

78. **Fats in Infant Feeding.**—Merriman, without detracting from the importance of carbohydrates, proteids, etc., in food, insists on the evil results of a deficiency of fats in infant feeding, among which he names rickets (which a supply of good fat food will often cure), difficult teething, spasms, croup, eczema and varying skin diseases. The growing child demands a larger portion of fats than the adult. When a proper amount of fat is supplied its combustion spares the albumin, so that the entire energy of the proteids can be expended on tissue growth and nutrition.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

May 16.

1 Connective Tissue in Carcinoma and in Certain Inflammatory States That Precede Its Onset. V. Bonney.
2 *Influence of Pregnancy on Certain Medical Diseases and of Certain Medical Diseases on Pregnancy. H. French.
3 *Juvenile Tabes Dorsalis. S. Stephenson.
4 New Method of Restoring the Continuity of the Bowel in Cases of Excision of a Growth Low Down in the Sigmoid Flexure. J. P. L. Mummery.
5 *Diagnosis of Perforating and of Chronic Duodenal Ulcer. Sir J. F. H. Broadbent.
6 Method of Administering Solids in Cases of Gastrostomy. A. E. Maylard.
7 Electrical Treatment of Atonic Conditions of the Digestive System. R. Morton.

2. **Pregnancy and Medical Diseases.**—In his third Goulstonian lecture French takes up the relations of typhoid and pregnancy, considering incidentally the transplacental transmission of toxins, agglutinins and bacteria, the question of artificial delivery, and the transmissibility of other specific fevers from the mother to the unborn child. He discusses the effects on the pregnant woman of measles, pertussis, scarlet fever, chickenpox, mumps, diphtheria and smallpox, and the relations with pregnancy of cholera, plague, malaria, influenza, lobar pneumonia, Addison's disease, leukemia, diabetes mellitus, diabetes insipidus, myxedema and chorea.

3. **Juvenile Tabes.**—Stephenson summarizes the conclusions of Cantonnet (*Arch. d'Ophthal.*, November, 1907), based on an analysis of 90 cases of juvenile tabes, including a carefully observed one of his own in a lad of 15, which demonstrate a certain evidence of syphilis, inherited or acquired, in 65.6 per cent., or as great as in adult tabes. The sex incidence was, however, reversed. Stephenson has little doubt that a proportion (possibly large) of those cases in children in whom the sole obvious findings include amblyopia and optic atrophy are in reality instances of juvenile tabes. A more systematic examination of the nervous system in such cases would result in a more definite diagnosis. The association in a syphilitic child of bilateral simple optic atrophy with loss of knee jerks would by itself point to a provisional diagnosis of juvenile tabes, and suggest the need of a neurologist's examination. Another suggestive combination would be paralysis of an ocular muscle with loss of the deep reflexes in a syphilitic subject. Stephenson reports five cases.

5. **Duodenal Ulcer.**—Broadbent discusses the etiology of duodenal ulcer, the results of perforation, and the symptoms, and reports three cases illustrating respectively: 1, localization of peritonitis to the right flank; 2, general peritonitis; 3, formation of subphrenic abscess. He then deals with non-perforating ulcer and its sequelæ, describing the character of the pain, vomiting and hemorrhage, and dilatation of the stomach—a symptom of great importance. He reports five cases. The diagnosis is more accurately made by a careful consideration of the history and the chronic character of the symptoms than by physical signs, which are usually very indefinite. He discusses the differential diagnosis from gastric ulcer, malignant disease of the stomach, new growth at pylorus, and gastric crises from tabes dorsalis. Gastrojejunostomy is the only satisfactory treatment.

British Medical Journal, London.

May 16.

8 *Anatomy of the Pancreas in Relation to Its Diseases. A. W. M. Robson.
9 *Fractures of the Patella Treated by Mobilizing the Lower Fragment. J. L. Thomas.
10 *Ectopic Gestation, with Unusually Early Symptoms. E. A. Searle.
11 *Method of Obtaining Rapid Healing of Acute Abscesses. J. Phillips.
12 Tumor of the Orbit Removed Without Enucleation and Without Loss of Sight. G. Apthomas.
13 *Influence of Pregnancy on Certain Medical Diseases and of Certain Medical Diseases on Pregnancy. H. French.

8. **The Pancreas and Disease.**—Robson considers the anatomy of the pancreas in relation to its diseases under the following heads: Anatomy of the pancreas—histology; inflammatory changes; topography of the organ as affecting its surgery; its anatomy in relation to cystic disease; variation in its ducts in relation to its diseases; hemorrhagic pancreatitis; catarrhal jaundice, usually catarrh of pancreas; diagnosis of chronic inflammatory disease; chronic pancreatitis in relation to diabetes; operative treatment in chronic pancreatitis; pancreatic lithiasis, and cancer of the pancreas.

9. **Fracture of Patella.**—Thomas describes the following method of treating fracture of the patella when the upper fragment can not be brought down enough by traction. He made a long curved incision well down over the shin and chiseled off from without the tubercle of the tibia with the ligamentum patellæ attached, taking care not to detach the tendinous and periosteal attachments along the inner edge. By forcible traction on the lower fragment of the patella and its ligament, the fragments were brought into contact and their bared surfaces kept in apposition with two loops of silver wire. The tubercle of the tibia retained considerable strength of anchorage in its displaced position by the untorn fibrous attachments of the ligament along its inner side. The immediate result of mobilizing the lower fragment was satisfactory as was also the functional result in time.

10. **Extrauterine Pregnancy.**—Searle reports a case in which the symptoms of ruptured tubal pregnancy were diagnosed and operation done fourteen days after conception.

11. **Rapid Healing of Acute Abscesses.**—Phillips reports cases illustrative of the following method for which he claims as advantages rapid healing, speedy disappearance of constitutional symptoms, infrequent dressing, with economy in dressings and lessening of risk of secondary mixed infection. The method is as follows: 1. Cleanse skin as in operating on sterile tissues. 2. Make incision long enough to permit free and complete evacuation of pus and rub the pyogenic membrane clean and smooth with gauze wrapped round the finger. 3. Having emptied the abscess cavity as completely as possible, pack it tightly with gauze (the author uses dry 1 in 1,000 bichlorid gauze) and apply a wool dressing and bandage as firmly as possible. 4. In forty-eight hours remove packing and dress wound as though it were a simple incision; i. e., do not pack or drain, but simply fix a gauze and wool dressing firmly in place with a bandage. Change once in three or four days until incision is soundly healed, and it will be found that the sides of the abscess cavity unite promptly and that there is no outpouring of pus.

13. See abstract No. 2.

Medical Press and Circular, London.

May 13.

14 Early Diagnosis in Surgical Diseases of the Kidney, with Special Reference to Physical Methods of Examination. D. Newman.
15 *Foul Breath: Its Causes, Pathology and Treatment. A. Wylie.
16 Neuritis Consequent on Cirrhosis of the Liver. M. Klippel.
17 Surgical Knowledge and Treatment of Syphilis. D'A. Power.

15. **Foul Breath.**—Wylie points out that foul breath may be (a) purely subjective, (b) purely objective, or (c) perceived by both the patient and others. Of the first class he instances the "curious burning smell" complained of by patients with disease of the brain in the region of the temporosphenoidal lobe. He describes the different forms of fetor as: 1. The putrefactive type, resembling decomposing cheese, found in antral disease, and with caseous collections in the nasopharynx, tonsils, etc.; also in tertiary disease of the nose and pharynx. 2. The sulphuretted hydrogen type, in pulmonary gangrene, bronchiectasis. 3. The garlic type, in those taking bismuth or antimony, also present, of course, chiefly in garlic or onion eaters. 4. The sweetish type, in glycosuria, or beer drinkers, associated with the presence of yeasts. 5. The toxic or hepatic type, associated with bacteria, e. g., the *Bacillus butyricus*, found in bilious people and those who bolt their food. The common causes are: 1, diseases of the nose and accessory cavities; 2, imperfect deglutition; 3, oral and lingual affections; 4, diseases of teeth and gums; 5, diseases of tonsils; 6, chronic suppuration of middle ear; 7, nasopharyngeal affections; 8, diseases of lung; 9, foreign bodies in mouth, nose, pharynx or larynx; 10, constitutional causes. Each of these groups is discussed. The last group he subdivides into: (a) gastrointestinal derangements, (b) glycosuria, (c) menstruation, (d) lactation, (e) drugs, (f) occupation, (g) nervous diseases. The pathology is due to imperfect secretion of glands, mucous and albuminous; deficient leucocytosis and absence of lymphoid elements; action of bacteria—*Bacillus proteus, Spirochæta refringens, B. butyricus, B. coli communis, B. subtilis, B. fœtidus ozænæ, B. pyocyaneus, B. lactis erythrogenes.* The treatment, after measures directed to the removal of the cause, consists in frequent and thorough cleansing of the mouth and teeth, evacuation of lacunar accumulations, removal of hardened tonsils, treatment of gastrointestinal conditions, removal of foreign bodies, antiseptic ear drops in middle-ear trouble, removal of bacteria by solvent nasopharyngeal douches and mouth washes, with subsequent application of antiseptics by spray to the diseased mucous membrane, gentle stimulation by snuffs, etc. The author strongly recommends the frequent use of formic acid lozenges. The patient's confidence must be gained, especially in subjective conditions.

Clinical Journal, London.

May 13.

18 General Paralysis of the Insane. W. P. Herringham.
19 Syphilitic Disease of the Nervous System. H. Campbell.
20 *Mortality Statistics During the Last Half Century. S. Phillips.

20. **Mortality Statistics.**—Phillips closes in this issue his review of the mortality statistics in Great Britain from 1855 to 1905. As a result thereof he arrives at the following conclusions: 1. In 1905 as in 1855 diseases of the respiratory organs accounted for about one-quarter of the total deaths; phthisis has declined, but pneumonia has increased. 2. The apparent increase in deaths from diseases of the circulatory organs and the decrease in deaths from diseases of the nervous system may be accounted for by the transfer of apoplexy from the latter class to the former. The combined total of circulatory and nervous disorders does not differ greatly—200 in 1855 and 230 in 1905. 3. The tuberculosis total mortality is 42 per cent., but it is divided among various organs. 4. The enormous decrease in deaths from exanthemata is seen in the fact that in 1855 they caused 170 deaths per 1,000, in 1905 only 75. 5. Malignant disease shows a rise from 17 in 1855 to 60 in 1905. 6. The rise in diabetes mortality is as marked as that from malignant disease. 7. There is a greatly increased fatality from nephritis, shown by a rise from 16 to 30 per 1,000 between 1855 and 1905. The data are taken from a comparison of the tables of 1,000 deaths in 1855 and in 1905.

Glasgow Medical Journal.

May.

21 *Causation and Treatment of Diabetes. A. Lorand.
22 Record of a Year's Work in the Royal Samaritan Hospital for Women, Glasgow. J. N. Stark.
23 *Aneurism of the Hepatic Artery. W. Rolland.

21. **Diabetes.**—Lorand asserts the association of diabetes with excessive use of meat and sweets. Diabetes, like exophthalmic goiter, has an hereditary basis. The relation between diet and diabetes lies in the alteration by diet of the organs which play so important a pathogenic rôle in diabetes, especially the pancreas and thyroid. Meat particularly produces alteration in the thyroid. Lorand and Minkowski have made dogs diabetic by the removal of the pancreas, and subsequently examined their thyroids which showed colloid degeneration. The adrenals also play a rôle in diabetes. The various ductless glands stand in close relation to one another. The proper treatment of diabetes is prevention. It must be recognized in the initial stages. The urine should be examined after a test dinner of quantities of sweets and meat. In early diabetes a quantity of sugar will be found in the urine in two hours. When sugar rises above 0.1 to 0.2 per cent. an antidiabetic diet must be given. Variety is essential. To moderate amounts of meat, green vegetables, a few eggs (unless there is distinct albuminuria), kefir or kumyss on the third day, with some sour cream. One or two oranges may be given. The meat should not be too much, and only once a day. Graham bread should not be forbidden. Fruits containing little glucose—apples, peaches—may be used stewed. The diet should be more severe in light cases, and more lenient in severe cases. In severe cases it is not so much the sugar as the diacetic acid that should occupy our attention. When present in quantity it can easily be detected by the iron perchlorid test. Four drams daily in divided doses of sodium bicarbonate may be given in alkaline water after meals. In a number of cases Lorand has had good results from the serum of thyroidectomized animals—the indications being nervousness, excitement and insomnia.

23. **Aneurism of Hepatic Artery.**—Rolland gives a careful report of a case with half-tone illustrations and collates in tabular form the forty previously recorded cases.

Journal of Obstetrics and Gynecology of the British Empire, London.

May.

24 *Frozen Sections by Bumm and Blumreich and by Zangmeister—Is There a Lower Uterine Segment? A. H. F. Barbour.
25 One Hundred Consecutive Hysterectomies for Fibroids Attended with Recovery; Injuries of the Ureters. J. Bland-Sutton.
26 Intrauterine Death of the Fetus Occurring in Six Consecutive Pregnancies: Importance of Examination of the Fetal Tissues for Spirochæta Pallida. H. Williamson and E. L. Holland.

24. **Lower Uterine Segment.**—Barbour concludes his paper from the last issue. He holds that he has proved: 1. That there is a decidual-lined area below the retraction ring in his section; 2, that a shorter length of the cervix agrees with a greater thickness; 3, that in this case the retraction ring is some distance above the os internum; 4, that, therefore, there is here a lower uterine segment which is not stretched cervix but part of the wall of the body of the uterus.

Archives Générales de Chirurgie, Paris.

March, ii, No. 3, pp. 213-324.

27 *Study of Jejunostomy. X. Delore and C. Thevenet.
28 *Hemorrhagic Infarct of Intestines from Mesenteric Thrombophlebitis. P. Mauclaire and F. Jacoulet. Concluded in No. 4.

April, No. 4, pp. 325-436.

29 *Ultimate Results of Gastroenterostomy for Gastric Ulcer. D. Denéchau. First part in No. 10, 1907.
30 *Cancer of the Hepatic Duct and at Junction of Hepatic, Cystic and Bile Ducts. (Cancer du confluent hépato-cholédocc-cystique, etc.) A. Lapointe and Raymond.

27. **Jejunostomy.**—Delore and Thevenet believe that this technic is preferable for artificial feeding, especially in cases of cancer or ulcer of the stomach and fistula in stomach or duodenum. They describe their experience with jejunostomy and three cases of gastric cancer, in a number of cases of active ulcer and one of fistula into the stomach after an ulcer. They assert that jejunostomy is also preferable in burns from the action of caustics; gastroenterostomy does not allow the stomach to be left in peace as after jejunostomy, which is particularly advantageous in cases of diffuse corrosion of the stomach walls. Gastroenterostomy may be preferable for active ulcer if the lesion is in the pyloric region and is accompanied by pyloric stenosis.

28. **Hemorrhagic Infarct of the Intestine.**—This study reviews in turn infarct from obliteration of a vein, from obliteration of an artery or from both combined, and the various forms of each type. Mauclaire and Jacoulet summarize fifty-eight cases, including one from their personal experience.

29. **Ultimate Results from Gastroenterostomy for Ulcer.**—Denéchau found excellent results in 10 per cent. of 109 cases of ulcer of the stomach treated by gastroenterostomy; good results in 44 per cent., and improvement in 38 per cent. In 7 per cent. there was some complication or the old disturbances had returned. Thirty-two of his patients were men. The ultimate outcome depends on the condition of the gastric mucosa. The best results were obtained in cases of stenosis from a healed ulcer in the pyloric region without gastritis. The stomach after operation is still far from being normal. Nothing irritating should be allowed by mouth, merely a little water the first day, sips of milk the second, proceeding very cautiously. Bread and wine should not be allowed until after a long period of complete freedom from pain. These simple precautions, with repose for a time after the operation, will have a marked favorable influence on the ultimate outcome. Medical surveillance is necessary for a long time to insure good results.

30. **Cancer of the Hepatic and Cystic Ducts.**—Lapointe and Raymond summarize 32 cases of cancer of the hepatic duct, with operative intervention in 6, and 38 cases of cancer at the junction of the biliary ducts, with surgical treatment in 12. Cancer of the hepatic duct seems to be beyond the resources of surgery, but various types of anastomosis seem to be practicable for cancer at the junction of the hepatic, cystic and common bile ducts, and Kehr has reported a case of successful end-to-side hepatico-duodenostomy, with the patient still in good health after two years.

Bulletin de l'Académie de Médecine, Paris.

May 5, LXXII, No. 18, pp. 493-515.

31 *Diagnosis of Dysenteric Abscess on the Convex Aspect of the Liver. A. Chauffard.
32 *Experimental Carbon Monoxid Poisoning; Resuscitation with Oxygen. (Intoxication d'un animal par l'oxyde de carbone. Traitement immédiat par de grands volumes d'oxygène.) N. Gréhant.
33 Therapeutic Value of Sodium Bicarbonate in Stomach Affections. G. Hayem.

31. **Diagnosis of Dysenteric Abscess on the Convex Aspect of the Liver.**—Marcano diagnosed the abscess by the pain in the right shoulder, the leucocytosis with polynucleosis, and repeated *x*-ray examination. The first radioscopy was misleading. Repeated exploratory puncture is also useful. Zancarol was unable to discover the abscess in one case even with thirty punctures. In case of inversion of the viscera the diagnosis may be almost impossible, as in a case seen by Alvarez in which the patient was finally cured by resection of two ribs on the left side and evacuation of a large abscess in the liver.

32. **Oxygen in Treatment of Carbon Monoxid Poisoning.**—Gréhant has been experimenting with dogs intoxicated with carbon monoxid. The blood contained after 16 minutes only 4.5 per cent. oxygen and 19.1 per cent. carbon monoxid. The animal was then made to inhale pure oxygen, and by the end of two hours the blood contained 27 per cent. oxygen and no monoxid, and the animal was lively as soon as released. The oxygen must be used freely—hundreds of liters may be needed for man—and must be applied as early as possible, possibly supplemented by artificial respiration. A similar resuscitation was realized with a dog under the influence of morphin and then intoxicated with the monoxid, and brought to life again by insufflation of oxygen and rhythmic compression of the thorax, fifteen minutes after the animal had ceased to breathe.

Presse Médicale, Paris.

May 6, XVI, No. 37, pp. 289-296.

34 *Treatment of Facial Neuralgia with Local Injection of Alcohol. J. A. Sicard.

May 9, No. 38, pp. 297-304.

35 Diagnosis of Non-painful Lameness of Hip Joint in Children. (Boiterles •on douloureuses de la hanche.) Desfosses and Ducroque.

34. **Treatment of Facial Neuralgia by Deep Injections of Alcohol.**—Sicard reports this treatment applied to 41 women and 22 men. He goes over much the same ground as Patrick and Hecht in THE JOURNAL, Nov. 9, 1907, giving illustrations of the technic, the point for injection and the anesthetic areas after injection of alcohol in the infraorbital, mental and supraorbital foramina. Previous surgical intervention rather detracts from the success of the alcohol injections. In other cases they gave perfect results, except in one case in which the needle could not be introduced into the foramen ovale, probably from some anatomic anomaly. Among the by-effects he has seen slight myosis, disappearing in about a month, but he noticed that the neuralgia alone induced myosis in 9 out of 44 cases before any injection of alcohol. The patients sometimes complained of a pricking or tickling in the tributary region, but this also vanished in less than a month. If the alcohol is not properly injected in the infraorbital foramen there is liable to be a tendency to paralysis of the nostril and upper lip, lasting for a month or two. He regards this "local alcoholization" as the chosen treatment now for all cases of facial neuralgia not of syphilitic, diabetic or malarial origin. It seems to be the only effectual remedy for tic douloureux. He adds that although this method, by its simplicity, its direct application without necessity for general anesthesia, the absence of any disfigurement, and the constancy of its successes, is demanded in trifacial neuralgia, it must not be regarded as a panacea for all neuralgias and especially for neuralgias of mixed nerves, as he has previously taught in an article in the *Revue Neurologique*, June, 1907, entitled "Dangers of Injections of Alcohol in the Sciatic Nerve."

Semaine Médicale, Paris.

May 6, XXVIII, No. 19, pp. 217-228.

36 Technic of Various Procedures for Serum Diagnosis of Syphilis. W. Fornet.

Archiv für klinische Chirurgie, Berlin.

LXXXVI, No. 1, pp. 1-276.

37 •Experimental Gastric Ulcer and Its Cure by Gastroenterostomy. P. Clairmont.
38 •Operative Treatment of Arteriovenous Aneurism. W. A. v. Oppel.
39 •Results of Operative Treatment of Cancer of the Large Intestine in 115 Cases. (Dickdarmkrebs.) J. Petermann.
40 •Surgical Treatment of Umbilical Hernia. (Nabelhernien.) M. Eschenbach.
41 •Operative Treatment of Varices, Elephantiasis and Leg Ulcers. G. Friedel.
42 An Adenomyofibroma in the Wall of the Common Bile Duct. A. Volmer.
43 •Operative Treatment of Exophthalmic Goiter. (Morbus Basedowii.) P. Klemm.
44 Foreign Bodies in Stomach and Esophagus. (Fremdkörper im Magen und in der Speiseröhre.) Neuhaus.

37. **Experimental Gastric Ulcer.**—Clairmont experimented on dogs, ligating vessels, excising a scrap of mucosa, and cauterizing with hydrochloric acid. The resulting lesions never resembled a true gastric ulcer, and gastroenterostomy never displayed any curative action.

38. **Arteriovenous Aneurism.**—Oppel reports a case in which three operations under chloroform were performed within nine hours for an aneurism in the axilla, with prompt recovery. In a second case the aneurism was in the neck, and considerable air entered the jugular vein. Danger was averted by immediate tamponing and uneventful recovery followed. The technic is illustrated.

39. **Cancer of the Large Intestine.**—Petermann reports that 11 out of 29 patients on whom a radical operation was performed survive after two years, and are free from recurrence; 7 have survived more than three years. Excluding the operative mortality, 63 per cent. are still free from recurrence more than three years since the operation and three after an interval of seven years. The operative mortality has grown constantly less in recent years. The total experience with 115 patients is reviewed in detail.

40. **Umbilical Hernia.**—Eschenbach describes the preferred technic and his experiences with umbilical hernia in 44 women, 15 men and 6 children. Umbilical hernia tends gradually to increase in size, and operative treatment is practically harmless, while the permanent results are so good, he says, that early operation should be advised. Obesity and advanced years are no contraindication. Attempts at reduction should be very cautious as there is a special tendency to gangrene in these cases, judging from his experience.

41. **Spiral Operative Treatment of Varices, Elephantiasis and Leg Ulcers.**—Friedel gives an illustrated description of 14 cases and expatiates on the advantages of a spiral incision running from ankle to knee, with from three to seven turns, according to the severity of the cases. The spiral incision heals as a deep spiral scar, the ulcer lying between the turns. Under spinal anesthesia a segment of the saphenous vein in the thigh is resected and the spiral incision then made around the leg. In future he will make even more turns, as the results were highly satisfactory, all the veins being thus severed more than once, and the entire field being so extensively drained that all inflammation subsides and there is no possibility of recurrence. As the incision is made, the edges of the wound are drawn far apart and every vein ligated. The gaping wound is then tamponed and all granulations that may develop during the healing are cut off so that the wound will heal with a deep linear scar. He adds that the indications for operative treatment for these affections are materially enlarged by this spiral technic.

43. **Operative Treatment of Exophthalmic Goiter.**—Klemm relates the experience at Riga with 32 patients given operative treatment. There was no operative mortality, and out of 27 patients followed to date, from 15 months to 8 years, 25 are cured, one improved and only one not improved. He regards the disease as a complex of phenomena, the cause for which is the morbidly altered thyroid. The "exophthalmic" thyroid is characterized by dilatation of its arteries, and the vascular signs in the gland and elsewhere are the main features of exophthalmic goiter; the severity of the affection is determined by the extent and intensity of the vascular signs. All but five of his patients were women, and a family tendency was manifest in 28 per cent. In 27 cases the onset was insidious; in five it began with acute symptoms; one patient while traveling was suddenly seized with the pronounced syndrome. His cases are reported in detail and his impressions are summarized in the statements that exophthalmic goiter is essentially a toxic, trophic and vasomotor neurosis caused by abnormal metabolism in the thyroid. The essential symptoms are those of disturbed innervation of the vessels, what Kocher calls "vasculous" symptoms. The best treatment is by an operation, as this insures the quickest, the most certain and the most permanent cure. He advocates operative treatment as soon as the diagnosis is made. He operated at one sitting, excising half of the thyroid most involved, and ligating the vessels of the other side of the gland. No anesthetic was used except cocain for the incision. The patients were told beforehand that it depended entirely on them whether the operation could be carried through. They were not fastened in any way, but they kept duly still and said afterward that the pain of the operation was not bad; the worst was the fear of suffocation as the thyroid was lifted out.

Berliner klinische Wochenschrift.

May 11, XLV, No. 19, pp. 905-948.

45 •Acute Yellow Atrophy of the Liver in Syphilis. (Acute gelbe Leberatrophie bei Syphilis.) W. Fischer.
46 Normal Histology of Suprarenal Cortex. (Nebennierenrinde.) O. Stoerk.
47 "Touch" Percussion. (Zur Tastperkussion.) W. Ebstein.
48 Atypical Case of Disturbance in the Conduction of Impulses in the Myocardium. (Störung der Reizleitung im Herzmuskel.) G. Joachim.
49 Pathologic Metabolism in Gout. (Stoffwechselpathologie der Gicht.) W. Laqueur.
50 •Hemolytic Streptococci. (Hämolyse der Streptokokken.) F. Fromme and T. Heynemann.
51 Action of "Lactobacillin" and Yoghurt Milk. J. Leva.
52 Two Cases of Sarcoma of the Prostate. W. Veil. Commenced in No. 18.
53 Diagnosis of Localization of Brain Tumors. (Diagnostik der Hirntumoren.) E. Forster.

45. **Acute Yellow Atrophy of the Liver in Syphilis.**—Fischer reports a case of acute yellow atrophy of the liver in a robust, previously healthy man five months after infection with ap-

parently mild syphilis. The liver affection proved fatal in ten days. In this and in three other cases recently reported, search for spirochetes in the liver was unsuccessful. The affection is probably of toxic origin. Acute yellow atrophy of the liver in connection with syphilis has been observed in about fifty cases according to the literature; only ten of the patients were men, and the syphilis did not seem to be malignant in any instance.

50. **Hemolytic Streptococci.**—Fromme found typical hemolytic properties in forty-nine strains of very virulent streptococci derived from patients with severe puerperal fever. The discovery of hemolytic properties will, therefore, aid in the differentiation and prognosis of puerperal fever. His experience confirms the importance of isolating patients with hemolytic streptococci in the lochia.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena.

April 18, XI, No. 7, pp. 241-288.

54 *Postoperative Lung Complications. A. v. Lichtenberg. Collective review. Commenced in No. 4.
55 *Operative Treatment of Neoplasms Compressing the Spinal Cord and Cauda Equina. H. Stursberg. Collective review. Commenced in No. 3.

54. **Postoperative Lung Complications.**—Lichtenberg reviews 221 articles on this subject in recent literature, and mentions with emphasis the very frequent occurrence of embolic pulmonary complications after operations in the lower half of the abdomen. Other lung complications are more frequent in operations on the upper half of the abdomen. His compilations from various clinics show that the highest mortality followed operations on the stomach, as also the largest proportion of fatal pulmonary complications (mortality 28.68 per cent., with 8.31 per cent. fatal pulmonary complications, in 2,175 operations on the stomach). Next come the operations on the biliary passages, with pulmonary complications in 1.92 per cent., and mortality of 12.66 per cent. in 1,042 operations. Then come 3,280 gynecologic operations with mortality of 7.83 per cent., and 1.52 per cent. fatal pulmonary complications. Then 3,526 goiter operations with 0.96 per cent. mortality and 0.42 per cent. fatal pulmonary complications. The smaller the absolute figure of the postoperative mortality, the larger the share of fatal pulmonary complications. Postanesthetic pneumonia seems to occur from the first to the fourth day, while hypostatic pneumonia does not develop until the sixth or ninth day. The latter is distinguished further by the lesser intensity of the pneumonic process and the localization in the lower lobes. Infectious pneumonia forms another group, for which a focus elsewhere is responsible. The fourth group includes the embolic pneumonias. Not all the unfavorable cases are placed on record and consequently the percentages are below the actual facts.

55. **Operative Treatment of Neoplasms Compressing the Spinal Cord and Cauda Equina.**—Stursberg gives the essential points of 141 cases, and tabulates them according to the localization of the tumor in the various segments. He advises operating even when the diagnosis is not quite certain, and opening the dura when palpation does not disclose the tumor.

Deutsches Archiv für klinische Medizin, Leipsic.

April, XCIII, Nos. 1-2, pp. 1-222.

56 *Genesis of Arteriosclerosis. Aufrecht.
57 *Periodic Febrile Conditions with Rheumatic Manifestations in Young Girls. (Rekurrierendes rheumatoides Ovulationsfieber.) G. Riebold.
58 Occurrence of Precapillary Phlebectasia on the Front and Side of the Chest, with Affections of the Circulatory and Respiratory Organs. C. Haeberlin.
59 Action of Temperature on the Mean Vital Capacity of the Lungs. K. A. Hesselbalch.
60 Total Capacity of the Lungs. Id.
61 Study of the Conditions in the Circulation in Infectious Diseases by Means of Blood Pressure. (Beurteilung der Kreislaufsverhältnisse bei Infektionskrankheiten mit Hilfe der Blutdruckbestimmung.) R. Dietschy and H. Hössli.
62 *Outline of the Heart with Various Valvular Defects. (Herzsilhoutte bei den verschiedenen Klappenfehlern.) T. and F. Groedel.
63 *Eventration of the Diaphragm. H. Arnsperger.
64 *Stomach Content with Gastric Cancer. (Carcinomatöser Mageninhalt.) H. Fischer.
65 *Pathology and Treatment of Diabetes Mellitus. C. Stäubli.
66 *Presence of Hemolytic Substances in the Stomach Content, and Their Importance for Diagnosis of Gastric Cancer. E. Grafe and W. Röhmer.
67 *Hereditary Form of Diabetes Insipidus. A. Weil.
68 Percussion. J. Plesch.

56. **Genesis of Arteriosclerosis.**—Aufrecht reports histologic research which confirms the assumption that inflammation of the vasa vasorum, leading to trophic disturbances in the media and intima, is the true origin of arteriosclerosis. The whole process is thus an arteritis, as we call any chronic affection of the kidneys "nephritis" even when it originates in the smallest vessels.

57. **Periodic Febrile Conditions With Rheumatic Manifestations.**—Riebold has previously described what he calls premenstrual or ovulation fever, which he ascribes to some focus of inflammation—pyelitis, tuberculosis, or some other morbid process. He describes six cases of recurring ovulation fever accompanied by rheumatoid symptoms and states that he has observed many others. No focus of infection could be found in any of these patients. The symptoms may suggest typhoid or acute articular rheumatism; salicylates do no good, and the joint manifestations are not marked. The blood in his cases was always sterile and its composition normal. Sweating and erythema were occasionally observed. In chronic cases the skin was thin and waxy, pale, dry and transparent. The hair fell out and nutrition suffered. He calls attention to the fact that the connection with menstruation seems to have escaped notice as the gynecologist seldom sees these cases and the general practitioner is only consulted for relief of the rheumatic symptoms. Among the theories advanced to explain the affection, he mentions perverted functioning of the ovary. In some cases there is tachycardia, and a permanent valvular defect may result. The periodicity of the attacks and of certain functions of the human organism in general, he thinks, deserves greater attention, and he adds that sooner or later internal medicine will have to take this physiologic periodicity into consideration more than is done at present.

62. **The Outline of the Heart with Valvular Defects.**—The outline of the heart varies with different valvular affections, as Groedel shows by several illustrations. It is possible to diagnose the special valvular defect by the shadow of the heart. A congenital heart defect can thus be readily differentiated. He gives a number of typical orthodiagrams to show the features of mitral and aortic insufficiency. With pure mitral stenosis the heart is comparatively small; the left ventricle is small, the left auricle is large. With mitral insufficiency the outline is enlarged in all directions.

63. **Eventration of the Diaphragm.**—Arnsperger relates a case in which he was able to diagnose this condition in a young woman, and describes the instructive points. Only ten cases have been diagnosed during life.

64. **Chemistry of the Stomach Content with Gastric Cancer.**—Fischer found abundance of the terminal products of the splitting of albumin, in contrast to the findings in the normal stomach. He shows how this explains the lack of free hydrochloric acid.

65. **Diabetes.**—Stäubli devotes fifty pages to a careful study of twelve cases of diabetes mellitus. In four cases remarkable fluctuation in weight was caused by retention of several quarts of water without visible edema or effusions. The patients merely looked a little plumper. Two other cases illustrate the remarkable way in which the conditions approximated normal as soon as the efforts of the organism in this direction were reinforced by regulation of the diet. Restriction of carbohydrates may have a very favorable action even in extremely severe diabetes with much acidosis. As a rule, ingestion of fat does not increase the acidosis bodies in the urine, but one of his patients displayed a striking dependence of the acetonuria on the amount of fat ingested. Large amounts of alcohol seem to have an inhibiting action on the acetonuria, but they affect the tolerance unfavorably. Some of the cases show the extremely unstable condition of the tolerance. Levulose, dextrose, etc., may have an injurious cumulative action. An intercurrent tonsillitis aggravated the diabetes in one case. One patient took the greatest interest in the question of the fluctuations in the elimination of sugar at different periods of the day, and study of this case showed periodical and regular variations in the output of sugar peculiar to the individual organism, besides the variations dependent on the diet. Closer

study of these periodical variations may determine the most propitious moment during the day for the intake of food. Among the other questions studied were the water metabolism, the influence of ingestion of albumin on the glycosuria, of carbohydrates and fat on the acidosis, of alcohol on the acetonuria, and of alkalies on the elimination of ammonia, total nitrogen and the acidosis bodies.

66. **Hemolytic Substance in Stomach Cement.**—Grafe and Röhmer review 127 cases in which the stomach content was examined for hemolytic substances. None was found in 20 healthy persons; in 24 with ulcer of the stomach, and in 31 with other gastric affections aside from cancer. The findings were constantly positive in 19 cases of carcinoma verified by operations and in 17 clinical cancer cases, and in 14 out of 16 suspicious cases. These hemolytic substances act on human and animal blood even in the smallest proportions. The substance is a lipoid, and the essential element is probably oleic acid, issuing from the carcinomatous stomach walls.

67. **Hereditary Form of Diabetes Insipidus.**—Weil gives the history of five generations of a family with 219 individuals in which 35 of the members presented diabetes insipidus. The first set of diabetic parents had 60 per cent. diabetic children; 21.8 per cent. diabetic grandchildren; 54.1 per cent. diabetic great grandchildren, and 28.5 per cent. in the fifth generation. The general health did not appear to suffer, two of the diabetics dying at 92 and 87 respectively. Unless they took the desired amount of water before each meal, they could not eat; one boy of five drank 7 quarts of water a day, and between the ages of 20 and 30 they drank 15 quarts and more; after 50 the symptoms were somewhat less pronounced. Digestion was good and there were no other disturbances.

Deutsche medizinische Wochenschrift, Berlin.

May 7, XXXIV, No. 19, pp. 809-856.

69 Determination of Value of Antidysentery Serum. (Wertbestimmung des Dysenterieserums.) W. Kolle, O. Heller and V. de Mestral.
70 Technic of Opsonic Index. Strubell.
71 Albumin and Fat Diet in Treatment of Motor Insufficiency of the Stomach. (Eiweiss-Fettdiät bei motorischen Insuffizienz des Magens.) J. E. Cook.
72 *Alimentary Lactosuria in Stomach Affections. (Beitrag zur Kenntnis des Milchzuckers im Harn.) A. von Halasz.
73 *Early Plastic Restoration of Eyelids After Burns. (Frühtransplantation bei Verbrennungen der Augenlider.) Pfalz.
74 Farinaceous Foods for Infants and Their Influence on Metabolism. (Mehle und Mehlfütterungen bei Säuglingen.) H. Rietschel.
75 Technic of Serum Reaction in Syphilis. (Wassermann-A. Neisser-Brucksche Reaktion bei Syphilis.) W. Fornet.

72. **Alimentary Lactosuria in Stomach Affections.**—Halasz has examined 45 individuals in respect to their tolerance of lactose; 150 gm. dissolved in water were taken fasting, and the urine was examined after four hours and every two hours thereafter for eight hours. The gastrointestinal tract was normal in all these subjects, and there was no evidence of lactosuria in any instance. Autopsy in 24 of these subjects confirmed later the soundness of the digestive tract. In another group of 23 cases of cancer or ulcer in the stomach, alimentary lactosuria was constant in every case, with one exception. Even a smaller quantity of the lactose gave positive results in this group. His tests show that the liver scarcely participates in the utilization of lactose. In one case the lactosuria aided in the differentiation of gastric from hepatic cancer. He does not regard this test as of much diagnostic value, however, but merely as an interesting form of elimination of sugar in pathologic conditions.

73. **Early Restoration of Eyelids after Burns.**—Pfalz advocates transplantation of Thiersch flaps before there is any formation of granulations. As soon as demarcation of the eschar occurs, he covers the defect so extensively that there is no further chance for spontaneous cicatrization.

Fortschritte der Medizin, Leipsic.

Feb. 10, XXVI, No. 4, pp. 97-128.

76 Spastic Paralysis with Cortical Amblyopia. (Fall von Littlescher Starre mit kortikaler Amblyopie.) K. Liebe.
77 *Prodromal Epistaxis. E. Hummel.

Feb. 20, No. 5, pp. 129-160.

78 Trophic Disturbances After Severing of Posterior Roots. (Trophische Störungen nach Durchschneidung hinterer Wurzeln.) G. Köster.

March 20, No. 8, pp. 226-256.

79 Prevention of Vaccinal Affections in the Environment of Recently Vaccinated Children. A. Groth.
80 Venesection. (Aderlass und anderes Veraltete.) F. von den Velden.

March 30, No. 9, pp. 257-288.

81 Importance of the Ocular Tuberculin Reaction for the General Practitioner. E. Sobotta.

April 10, No. 10, pp. 289-320.

82 Multiple Infarcts in Kidneys with High Blood Pressure. (Multiple Niereninfarkte mit hohem Blutdruck.) Hürter.

April 20, No. 11, pp. 321-352.

83 Practical Experiences with Modern Methods of Phototherapy. (Neuere Lichtbehandlungensmethoden.) E. Hesse.

77. **Prodromal Epistaxis.**—Hummel warns that "idiopathic" nosebleed in elderly individuals is most frequently a symptom of contracted kidney or of arteriosclerosis, and should not be passed over lightly. He mentions some cases in which this warning epistaxis had occurred a few weeks before apoplexy. The epistaxis had been casually treated by tamponing without regard to the underlying trouble.

Medizinische Klinik, Berlin.

May 10, IV, No. 19, pp. 693-732.

84 *Treatment of Anemias. K. Ziegler.
85 Multiform Erythema as Symptom of Severe Constitutional Disease. R. Ledermann.

84. **Treatment of Anemia.**—Ziegler concludes his review of this subject by urging exact quantitative and qualitative analysis of the blood to recognize injurious influences and thus be able to divert them. Good results may be anticipated when the source of the trouble is known and can be combated, but in the absence of this, as in chlorosis, much can be attained by external and internal means, although in the severer forms the results are transient or *nil*. He explains the influence of mountain air in the apparent increase of the number of the red corpuscles as due partly to concentration of the blood by the passage of water into the tissues and the air expired. It is possible also that the red corpuscles mature faster under the influence of the different conditions in regard to sunlight and radiation—a phenomenon which is not necessarily accompanied by increased production. The layer of atmospheric air is so much thinner that certain effectual factors of the sunlight may make their influence felt in a more intensive manner. This assumption of more rapid ripening is sustained by what is observed with the Roentgen and radium rays, especially as radium rays are also evident in the sunlight. Mountain climate and the Roentgen rays can not be depended on exclusively, however, in treatment of severe anemic conditions; the regeneration that follows the action of the latter is comparatively slight and long in developing. Experimental and clinical experience has made it probable that perversion or lack of the functioning of certain glands with an internal secretion may influence the formation of blood unfavorably. The anemia itself is merely a symptom. Some advocate a mild course of treatment with male fern in every case of pernicious anemia of unknown origin. Grawitz ascribes the majority of cases of pernicious anemia to intestinal autointoxication, and daily rinsing out of the stomach and bowels may be useful in some cases; in others the gastrointestinal symptoms are merely the results of the anemia. Ziegler believes that iron and arsenic serve mainly as stimulants for the blood-producing organs, and also possibly for the glands with internal secretion. The slight injury they inflict on the cells stimulates them to regenerative processes. The effect is similar to repeated minute venesections. The principle is to begin with small repeated doses and only gradually increase them, and to interpose periods of suspension so as not to exhaust the regenerative forces. Transfusion of homologous blood has certainly a powerful regenerative influence on the production of blood. It may possibly supply active protecting substances, although there is the possibility that the healthy blood may not be isotonic with the anemic blood.

Münchener medizinische Wochenschrift.

May 5, LV, No. 18, pp. 945-1000.

86 Importance of Training the Fingers to Take the Place of the Eyes in Obstetrics. (Das "Auge des Geburtshelfers.") H. Sellheim.

87 Minor Technical Points in Biologic Blood Test. (Kleine technische Winke für die Praxis der Uhlenhuthschen Blutuntersuchung.) H. Merkel.
88 *Acute Overexertion of the Heart. (Akute Herzüberanstrengung.) Schott.
89 Proteolytic Action of Sterile Pus. (Proteolytische Wirkung des sterilen Eiters.) R. Hertz.
90 *Diabetes in Pregnancy as Indication to Terminate the Pregnancy. (Diabetes mellitus in graviditate.) A. Schottelius.
91 *Acute Yellow Atrophy of the Liver. (Aetiologie, Anatomie und Diagnose der akuten Leberatrophie.) Reichmann.
92 Origin and Treatment of Hernia. W. Koch.
93 *Hot Irrigation in Treatment of Venereal Ulcers. (Behandlung der venerischen Geschwüre mit heissen Irrigationen.) F. Zinsser.
94 *Gelatine-Saline Injections Against Intestinal Hemorrhage in Typhoid. (Gelatine und Salzwassereinspritzungen gegen die Darmblutungen beim Typhus.) K. Witthauer.
95 Sanatorium Treatment and Its Indications. (Heilstättenbehandlung und Anzeigen für dieselbe.) A. Frankenburger. Commenced in No. 17.
96 Stethoscope-Reflector-Mirror. (Praktisches ärztliches Untersuchungsinstrument.) Kretzschmar.

88. **Acute Overexertion of the Heart.**—Schott ascribes the contradictory findings by various investigators in respect to the effects of extreme competitive physical exertion to the fact that the skiagrams were not taken before and after in the identical position. He avoids this by bringing into line at each exposure the nipples, the mammary line and the middle of the thorax, each marked with a disc of lead glued to the spot. He describes his extensive research, all of which confirms the assumption that excessive physical exertion, carried to the point of noticeable throbbing of the heart and panting leads finally to acute dilatation.

90. **Diabetes in Pregnancy.**—Schottelius declares that the prognosis for both mother and child is bad. The fetus dies and is expelled after a few months, as a rule. If the pregnancy reaches term the children are poorly developed; hydrocephalus is common. Fully half of the women die in coma (Gaudard). He describes a case in which a pregnant woman of 29 was received at the clinic in profound coma. Eclampsia was diagnosed and she was delivered at once of a macerated fetus. The patient died half an hour later. In this and in Born's case the severe affection complicating the pregnancy had been overlooked by the attending physician. The only suspicious symptom, the increased thirst, had not been mentioned by the patient, but was remembered afterward by the family. In both cases the diabetes had evidently developed during the pregnancy. The prognosis in these conditions is particularly grave. The uncertainty of the outcome and the possibility of coma demand interference to remove the factor inciting or aggravating the diabetes, that is, the pregnancy. From 30 to 50 per cent. of the children are already doomed. The intrauterine death of the fetus renders the prognosis still more serious.

91. **Acute Yellow Atrophy of the Liver.**—Reichmann had occasion to study the development of acute yellow atrophy of the liver in a youth under treatment for keratitis. The first stage was mild, the liver gradually becoming enlarged, with general jaundice; the second stage came on with transient stupor followed in 72 hours with violent delirium and death in three weeks after the first symptom. The aim in treatment should be to prolong the first stage as long as possible to prevent the development of the second stage. The premonitory symptoms of the latter are the appearance of leucin and tyrosin in the urine and the depression or restlessness observed for one or two days before the outbreak of the delirium. Until the cause is discovered, treatment can be only symptomatic, with purgatives and analeptics.

93. **Treatment of Venereal Ulcers with Hot Irrigation.**—Zinsser irrigates the ulcer from three to five times daily with a jet of hot disinfectant solution. The douche jar holding 4 or 5 liters of a 1 to 4,000 solution of potassium permanganate, at a height of 2 or 3 meters, lets a stream 2 m.m. in diameter play on the ulcer. The jet of hot fluid thoroughly cleanses out all the crevices of the ulcer. The temperature should be as hot as the patient can bear, up even to 144 F. The floor of the ulcer is then dried with gauze, dusted with a thin layer of iodoform and packed with iodoform gauze. The tampon is then wet with camphor, over which hot linseed meal poultices are applied, frequently renewed. In severe gangrenous chancres this procedure is repeated every two or three hours. The patients can apply these measures themselves after the focus has been opened. The results have been good in several years' experience. They are the more striking, the more destructive the lesion. He thinks the benefits are due to the mechanical cleansing of the secretions, plus the destruction of the causal germs, plus the hyperemia induced.

94. **Gelatine and Salt Solution Injections in Typhoid Hemorrhage.**—Witthauer states that great benefit may follow subcutaneous injections of gelatine and salt solution in hemorrhage from the intestines in typhoid. He reports four severe cases in which this treatment proved effectual. He recommends injecting the gelatine every day or second day, repeating the saline infusion more frequently.

Wiener klinische Wochenschrift.

May 7, XXI, No. 19, pp. 675-708.

97 *G. van Swieten. O. Bergermeister.
98 Negative Reaction to Lecithin in Syphilis. M. Oppenheim.
99 Snapping Hip Joint. (Sogenannte schnellende Hüfte.) D. Pupovac.
100 Opsonins in Blood of Healthy Immunized Mothers and Newborn Infants. M. v. Eisler and M. Sohma.
101 *Nomatous Anthrax in Adults. (Nomatöser Brand.) A. Weiss.
102 *Secondary Parotitis. W. Kulka.
103 Results of Clamping Umbilical Cord. (Nabelabklemmung.) W. Meyer.

97. **G. van Swieten.**—The 150th anniversary of the Vienna Widows and Orphans' Fund of the local medical society was celebrated recently and its founder, van Swieten, was duly honored. Bergmeister here gives a sketch of his notable career.

101. **Nomatous Anthrax in Adults.**—Weiss reviews what has been published on this subject and describes a typical case in a iii-para of 37.

102. **Secondary Parotitis.**—Kulka reports a case of parotitis developing six days after a kick from a horse, injuring the left hypochondrium. The patient was a man of 22 and his brother had also had a similar experience several years before. The skin had not been broken, and it seems that mere concussion of the abdominal viscera is liable to entail an affection of the parotid and submaxillary glands on the same side. Transient glycosuria was also observed after the contusion. The parotitis healed after incision, application of a Bier suction apparatus and disinfection with peroxid of hydrogen.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

A STUDY OF THE BRAINS OF SIX EMINENT SCIENTISTS AND SCHOLARS BELONGING TO THE AMERICAN ANTHROPOMETRIC SOCIETY, Together with a Description of the Skull of Prof. E. D. Cope. By E. A. Spitzka, M.D., Professor of General Anatomy, Jefferson Medical College, Philadelphia. Pp. 308, with illustrations. Paper. Philadelphia: American Philosophical Society, 1907.

HYDROTHERAPY. By Simon Baruch, M.D., Professor of Hydrotherapy in Columbia University (College of Physicians and Surgeons), New York. Third Edition, Revised and Enlarged. Pp. 544, with illustrations. Cloth. Price, $4.00. New York: William Wood & Co., 1908.

HANDBUCH DER BIOCHEMIE DES MENSCHEN UND DER TIERE. Herausgegeben von Dr. Phil. et Med. Carl Oppenheimer, Berlin. Erste Lieferung, Mit 11 Abbildungen.. Pp. 160. Paper. Price, $1.25. Jena: Verlag von Gustav Fischer, 1908.

THIRTY-SECOND ANNUAL REPORT OF THE NEW JERSEY STATE HOSPITAL AT MORRIS PLAINS, for the Year Ending Oct. 31, 1907. Paper. Pp. 114. Trenton: John L. Murphy Publishing Co., 1908.

THE HARVEY LECTURES, Delivered under the Auspices of the Harvey Society of New York, 1906-07. Pp. 314, with illustrations. Cloth. Price, $2.00. Philadelphia: J. B. Lippincott Co., 1908.

WHY WORRY? By George Lincoln Walton, M.D., Consulting Neurologist to the Massachusetts General Hospital. Pp. 275. Cloth. Price, $1.00. Philadelphia: J. B. Lippincott Co., 1908.

CONSTITUTION AND LIST OF MEMBERS OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. Published by the Permanent Secretary, 1907. Pp. 242. Paper.

MEDIZINISCHES LITERATUR-U. SCHRIFTSTELLER-VADEMECUM, 1907-08. Herausgeber: H. Albert, Bibliograph. Pp. 637. Cloth. Price, $2.85. Hamburg 8: Frank & Scheibe, 1908.

WINNING FOREIGN MARKETS, Department of Commerce and Labor, Bureau of Manufacturers. Pp. 256. Paper. Washington: Government Printing Office, 1908.

RIGHTHANDEDNESS AND LEFTHANDEDNESS. By George M. Gould, M.D. Pp. 210, with illustrations. Cloth. Price, $1.25. Philadelphia: J. B. Lippincott Co., 1908.